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in this issue ...

- **The Chickens Come Home to Roost.** How can an executive acquire experience in top-level decision-making without exposing himself and his company to the risks that inevitably go with it? One seemingly off-beat—yet highly practical—answer is the so-called “business game,” in which years of business experience can be simulated and compressed within a single day of concentrated practice. Unlike other training techniques, business games provide feedback—enable participants to see the impact of their decisions in company P & L statements and other realistic measures of performance. This month’s article reviews the wide variety of available business games and their special applications.
- **“No Job Is Too Big.”** A new kind of corporate teamwork is rapidly coming to the fore as companies, both large and small, are joining forces to handle special projects that would overwhelm any one of them alone. ROBERT HERSEY’s article on page 9 tells how this new type of organization can be used in handling the out-size project—either military or commercial.
- **And Keep It Going.** “Every suggestion system needs an occasional shot in the arm—not when it is languishing in the doldrums, but while it’s still smart and sassy,” declares HOWARD M. DUFFY (page 14). Drawing on a variety of industry experiences, he tells how some leading companies are licking the perennial problem of all suggestion systems—the lull after the first storm of enthusiasm.
- **More Value from Value Analysis.** Though management has come to recognize the importance of value analysis, it hasn’t begun to reap the benefits that are potentially there. Professor HOWARD T. LEWIS’ article (page 20) analyzes some of the problems that must be resolved—at the top-management level—if value analysis is to produce really worthwhile results.

—THE EDITORS

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DRESS REHEARSAL FOR DECISION- MAKING



The Growing Use of Business Games

■ **Joel M. Kibbee**

*Director of Special Projects
American Management Association*

A MEDIUM-SIZED MANUFACTURING COMPANY, which makes and markets several products on a national basis, recently had a narrow brush with disaster. The firm had undergone a complete change in management, from the president down to plant managers and regional sales directors, and the inadequate background of the new managers was immediately reflected in the profit-and-loss statement. Organization structure was poor, responsibility and authority were confused, communications were a tower of Babel, and the president spent most of his time putting out fires—even to the extent of personally checking on shipping schedules. Things went on in this precarious manner during the five years in which the managers were learning to cope with their problems, until experience finally

proved a good enough teacher to enable them to put the company back into the black.

Fortunately for the employees, the stockholders, and the managers—for the business suffered severe losses during the period while the managers were learning their trade—this company was fictitious. The managers were operating a simulated company—or, in more common terms, they were “playing a business game.” And the five years of business experience, which would have proved costly indeed in an actual corporation, were compressed into a single day of concentrated management practice.

The use of simulation for management training is relatively new, but, like the concept of management training itself, it is expanding rapidly. The range of its applications is wide, from management of a gas station to management of a large corporation.

“Business game” is perhaps an unfortunate term, since these “games” have a serious purpose. (If they provide enjoyment while they train, that is all to the good, of course; education need not be boring to be worthwhile.) But even though the word “simulation” may be more accurate, participants will probably continue to talk about “playing the game.”

SIMULATION IN INDUSTRY

Many companies—among them General Electric, Pillsbury Mills, Standard Oil of New Jersey, International Business Machines, Westinghouse, and Remington Rand—are involved in the development of business games for their own use. A number of universities now include them as part of their executive development program. The American Management Association continues to find new uses for simulation training in its seminars and courses.

Simulation is a management tool being used for many purposes other than training. In the last few years, spurred on by the enormous computational speeds available with electronic computers, the use of “mathematical models” in business applications has grown. Models of business situations—marketing, inventory control, corporate planning—can be built and used, just as engineers build and test models of airplanes. In fact, simulation has been referred to as a management wind tunnel.

Simulation has helped the Port of New York Authority in deter-

mining the design and operation of its West Side Bus Terminal. Oil companies have been able to achieve more profitable production by means of "refinery simulation." United Air Lines uses a computer to try out various policies for running an airport without interfering with current operations. Models of complete divisions and of complete corporations are now being constructed in various companies, which plan to use simulation to help answer such questions as whether to build a new plant, whether to introduce a new product, or whether to embark on a particular marketing campaign.

The use of simulation for training purposes is not new. The Link Trainer has made it possible for thousands of pilots to practice instrument flying without leaving the ground—a saving in life and money. The military have played war games. Case studies, role playing—perhaps even the celluloid golf ball that can be driven around the living room—all might be thought of as attempts to improve skills without recourse to the real thing.

What distinguishes a business game from other educational techniques is its dynamic nature—its provision for feedback. Participants see the impact of their decisions and management performance reflected immediately in the company profit-and-loss statements. The chickens come home to roost.

The first business game to be developed has already been described in *THE MANAGEMENT REVIEW**. Other games now in use may differ as to the level of the participating executives or the nature of the decisions to be made; they may be specialized to a particular industry, to a particular company, or to a particular job. But their general form is similar, and the purpose of all of them is management education.

PLAYING THE GAME

In a recently introduced game, referred to at the beginning of this article, about 60 executives are divided into four or five companies. These companies are similar, and each has the same history, current cash, inventories, and so forth. The companies are non-competitive, in the sense that they are not competing with one another in the same market, but each endeavors, through good man-

* F. M. Ricciardi, "Business War Games for Executives: A New Concept in Management Training." *THE MANAGEMENT REVIEW*, May, 1957.

agerial performance, to achieve the best over-all company operations.

Each company manufactures and markets two products and is in the process of developing a third. Each has two plants and two sales regions. The executives of the company must develop a sound organization, delineate specific job responsibilities and authority, and set up lines of communication and control. They must specify company objectives, develop long-range plans, and accomplish these objectives and plans through current operations.

The time period covered by the simulation is usually five or ten years. As decisions are made each quarter, they are fed to a computer, and performance reports are returned. The plant managers must set levels of production, decide whether to hire or lay off workers, and budget funds for plant administration and industrial engineering. The sales managers control the size of the sales force, establish the compensation plan, and decide on the expenditures for local advertising and sales administration. Decisions must also be made on the purchase of raw material, shipments to the field, and the pricing of the products; and there are problems of cash flow, expenditures for research and development, and the introduction of a new product to be settled.

The heart of the simulation is not, however, the quantitative decisions that have to be made. Of greater impact and importance are questions of organization, communication and control, and setting objectives and long-range plans. In fact, a broad variety of management principles are evidenced in any simulation exercise.

It is said that an executive can transfer some of the lessons learned at the poker table to real-life business. But a simulation exercise comprises many more elements than a card game. It includes briefings, operations, discussions, and critiques—all administered by a trained staff, and all necessary for its proper use. It is used as part of a course or seminar, or as one phase of a management development program.

ADVANTAGES OF SIMULATION

Simulation has some important advantages compared to other types of training:

1. It can provide a dynamic opportunity for learning such management skills as organization, planning, control, appraisal, and

communication. Nothing can evidence poor organization or poor planning as well as a poor P & L statement. One company's organization chart, for example, had the purchasing manager and the plant manager reporting to different vice presidents. When this was coupled with poor planning and poor control, it should have come as less of a surprise to the president to learn that production had to be cut because of a shortage of raw material.

2. Simulation can provide an executive with an appreciation of over-all company operations and the interaction between men, money, and materials. It helps make a generalist out of the specialist who has never had the opportunity of viewing his decisions as they affect the organization as a whole. The marketing executive who finds himself in the role of plant manager, for example, gets a much clearer picture of the problems of maintaining level production in the face of a fluctuating volume of orders from the sales regions.

3. Simulation can provide executives with practice, insight, and improvement of their main function: making decisions. Faced with realistic decisions about typical business problems, they can experience years of business activity in a matter of hours, in an environment similar to that they face in everyday life.

4. Simulation can exhibit what Dr. Forrester of M.I.T. calls the "dynamic, ever-changing forces which shape the destiny of a company." The general business principles that are illustrated can be studied and understood by the participants. A simulation conducted at M.I.T. has shown, for example, that "with very simple retail sales changes and with no external disturbances affecting the company, typical manufacturing and distribution practices can generate the types of business disturbances which are often blamed on conditions outside the company."

SPECIALIZED APPLICATIONS

Some games are quite specialized. The General Electric Company has introduced games as part of its training program in the area of production planning and control. There are separate exercises for job-shop dispatching, production leveling, inventory control, master scheduling. In the job-shop dispatching exercise, the participants face the problem of dispatching various jobs that are routed over

(Continued on page 71)

"NO JOB IS TOO BIG..."

*The Multiple Organization—
Management's answer
to complexity*



■ Robert Hershey

Personnel Manager, Bulova Research and Development Laboratories

The growing size and complexity of some of the research and development jobs now being parceled out by the Defense Department are breeding what almost amounts to a new form of business enterprise—team contracting. Companies with a variety of capabilities are putting their heads together for the sake of submitting a single bid on a big defense contract. This type of corporate cooperation has advantages for both big and small firms.

—*The Wall Street Journal* 8/18/58

THE COMPLEXITY OF SPACE-AGE PRODUCTS has forced the extension of the state of the managerial art. Because so few companies have the broad technical expertness or financial capability required in this new area, we have seen the rise of what we might call the multiple organization or the *multiorganization*—an organization that has no corporate identity of its own but is composed of the personnel of several companies for the purpose of handling a project that would overwhelm any one of them alone.

Such an organization has its origins as a business entity when one firm gets word that a major procurement is under way by one of the military agencies for an item or system on which the company feels it has the capability to perform. After carefully evaluating whether or not to do it alone, the company finally decides that its own interest would best be served if the project were handled on a multiorganization basis. It behaves very much as if it were seeking a prospective company with which to merge. A list of prospective companies whose capabilities can complement its own is prepared, and feelers are sent out to these preliminary selected companies to determine their reaction to such a joint venture. When the list of companies is narrowed down to those who feel that they, too, stand to gain by becoming part of such a team, the original company establishes another list indicating their preferences. Finally, after due negotiations and preliminary exchanges of information, a multiorganization team is established.

The members of this team busy themselves with the preparation of a proposal outlining the problems as they understand them, the scope of work to be completed within that framework, the methods of attack to employ in solving the problems imposed by the project, and the means by which they intend either to test the feasibility of their approach or actually to deliver the hardware.

Government agencies are tending to encourage the formation of multiorganizations to avoid the risks entailed in placing large procurements solely with the largest of companies. By so dividing the task, they do not have to sink or swim with one concern. Furthermore, they are promoting a national objective of broadening the base of technical know-how among many companies throughout the country.

ADVANTAGES OF MULTIORGANIZATIONS

Supporters of the multiorganization concept have welcomed the military's cooling attitude toward the traditional contractor-subcontractor relationship. Feeling that buck-passing and lack of cooperation is inherent in a situation where one company is, in a sense, subservient to another, they believe that the teamwork spirit of the multiorganization is entirely lacking in the traditional contractor-subcontractor relationship.

Aside from the aspects of the increased cooperation, with resultant improved performance and delivery, advocates of the multi-organization believe that in some jobs no one company has enough of a particular talent to perform competently on such huge procurements. They also feel that the advantages gained by all participants being engaged in the project from the outset permits them a head start that they would never enjoy in their historical contractor-subcontractor roles, since all member companies know the over-all picture and the tasks of the other companies from the outset, and there are fewer last-minute changes in the project.

Smaller companies welcome the multiorganization as a technique that permits them to perform on a large contract that would otherwise be closed to them because of their size. A small, highly specialized company can be an important factor in a successful multi-organization team, whereas it could never hope to compete with larger firms if its specialty were only one phase of a conventional procurement.

From the standpoint of a large company, the multiorganization arrangement permits it to enter various fields without using all its economic and personnel resources. It can thus broaden its own base of capabilities by diversifying in several fields and participating in one or more multiorganizations. Many companies also find the multiorganization a hedge against putting all their income tax eggs in one basket.

PROBLEMS AND DISADVANTAGES

However, the multiorganization concept has not gone without criticism. Some management people feel that there is no substitute for complete control over a project and that the team organization dilutes a company's control over the end product. They also point out that the complexity of communications requires a coordinative effort that is not usually experienced in existing corporations.

Some detractors also believe that they expose themselves to the risk of having to live with the faults and shortcomings of the other members of the team, since once a team is set up and a contract is let, there is no turning back. Others feel that the high degree of communications involved in maintaining the necessary liaison among team members makes the cost of preparing a proposal much greater

than it would be had the company prepared the proposal entirely within its own facility. Those critical of the multiorganization concept also point out that it can slow down the completion of the contract, because there are more people who must be advised of the progress at various stages and who must concur on an approach.

Some of these criticisms are inherent in the structure of the multiorganization, but others are known in advance and can be minimized. For example, there is no denying that communications skills and techniques must be developed to a higher degree than is common practice in most corporations. Knowing this in advance leads to a logical approach to the problem: a liaison man or a group must, of necessity, be maintained. Carbon copies of memos must be prepared with generosity to insure that no member of the team lacks information, and all written communications must be coded so they can quickly be selected from the files with a minimum of effort. All telephone conversations between the members of the team should be documented and copies circulated to the other members so that everyone is as up-to-date as possible on the progress of a problem. Liaison people should become familiar with the operating methods of the member companies—methods that may be quite different from those of their own companies.

As for living with the inadequacies of a member company, each concern has at the outset an opportunity to carefully evaluate the past performances, organization, and general business reputation of a prospective teammate. Companies firmly entrenched in government business usually know, and most certainly should know, how Company A performed on the X guided missile, or how Company B performed on the Y rocket engine, or how Company C is regarded in the field of instrument controls. When the multiorganization is being formed, all these factors should be taken into consideration. With enough information concerning past performance and a company's general reputation, there should be sufficient basis for an intelligent evaluation of its value as a teammate.

CONFLICTS OF INTEREST

Different combinations of companies and tasks may, in the course of the relationship, give rise to varying areas of conflict among team members, but two particular areas are the most frequent sources of

trouble. One is a conflict of interests that arises when one company's proprietary product, processes, or specified techniques can be utilized in the work of the multiorganization. The withholding of such information may not only prevent the team from producing its best effort, but, if such an attitude is sensed or suspected by the other members, it can undermine the entire effort. Because this situation is particularly likely to arise when two or more cooperating companies have similar product lines, it is perhaps advisable for such companies not to enter into a multiorganization relationship.

The second area of conflict among members, the converse of the first, occurs when one company insists that the final product should embrace or utilize a particular product, process, technique, or approach in which that company excels. Such a position is usually motivated by anticipation of increased business from the results of the multiorganization operation. When this attitude is in harmony with that of the other members, there is, of course, no conflict; in fact, it may have been for just such a reason that a given company agreed to participate as a team member. But when this position develops in the course of the relationship and, in the opinion of the other members, is inimical to the multiorganization as a whole, the success of the entire operation is threatened.

For example, three companies who are cooperating in the design and production of a missile may be confronted with the decision of choosing a target seeker. Although an infra-red seeker might be most compatible with the over-all concept of this missile, an electronics member could foresee increased future business should a radar-type seeker be employed. Trouble is due to follow when the reason for his position becomes obvious to the other members of the team.

Such a conflict in approach can best be handled by the same method used to resolve a technical difference in approach; namely, by the participants' agreeing *in advance* as to how such problems (and other unforeseeable differences) will be resolved.

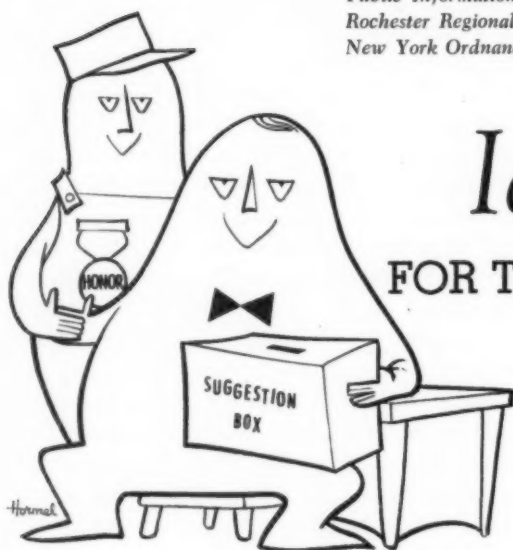
ORGANIZATION OF THE TEAM

In conventional types of company organization, ranging in complexity from the sole proprietorship to the multidivisional corpora-

(Continued on page 74)

■ **Howard M. Duffy**

Public Information Officer
Rochester Regional Office
New York Ordnance District



Ideas FOR THE ASKING

Promoting a Vital Suggestion System

EMPLOYEE SUGGESTION PROGRAMS that get off to a fine start, then lose their steam and slow down or grind to a complete halt, usually have one common weakness: lack of perpetual promotion.

Every suggestion system needs an occasional shot in the arm—not after it languishes in the doldrums of despair, but when it's still smart and sassy. Crackling promotion and publicity—beamed to employees, to supervisors, to top management, and to the public—can pump the lifeblood of interest and action to the nerve centers of your suggestion program.

Four characteristics distinguish all successful suggestion systems: (1) they stimulate more employees to contribute ideas for improvement; (2) they keep the general public, as well as the employee public, fully informed of the fine accomplishments of employees; (3) they secure and maintain a high degree of top-management interest; and (4) they gain the strong support of supervisors to

encourage the full use of the ingenuity and skill of their employees.

In achieving these desired objectives, the more successful programs use a variety of media and techniques to get across a message that is fresh, lively, attention-commanding, and stimulating. Their promotional methods are packed with imagination and enthusiasm.

STIMULATING EMPLOYEE IDEAS

One sure sign of a faltering suggestion system is the frequently heard employee complaint, "I sent in a suggestion, but the firm didn't do anything about it."

A.C. Spark Plug does something about employees whose suggestions are not adopted. The supervisor of the suggestion plan sits down with employees who have submitted several unsuccessful suggestions for the purpose of encouraging them to submit more and better ones. In these interviews, the employee's thinking is guided so his future suggestions will have a better chance of hitting the jackpot.

New employees are greeted at American Cyanamid Company with a letter that says, in part, "You've been here long enough to see how we do things. You bring with you experience you have gained in your previous places of employment—perhaps a new approach to our problems. Won't you use the enclosed blank to give us the benefit of your ideas?"

The Rochester Ordnance District has a method of further stimulating successful award winners. A photograph is taken of the commanding officer handing a check to the employee, and two 8"x10" prints are made. One is placed on the incentive awards



A neglected suggestion system will discourage contributors.

bulletin board; the other is given to the employee. This has the effect of making the employee feel he is closer to top management and gives additional recognition to award winners.

KEEPING THE PUBLIC INFORMED

The second objective of a good suggestion system involves getting the story of your employees' outstanding ideas to the public. It is a story that should be told, fully and effectively, to the employees, to the general public, and to such special publics as trade associations and professional societies.

Many firms emphasize displays or exhibits depicting worker accomplishments and what they did for the company. Others utilize such milestones as the \$25,000 mark in cash awards or the hundredth employee to receive a suggestion check as the basis for news and feature stories for local newspapers, radio, and television.

Kennecott Wire & Cable Co. recently used newspaper coverage effectively to announce a revitalized suggestion system. Headed "Ideas can earn up to \$50,000," the release pointed out that American industry has advanced to the place it holds in our economy through the adoption of ideas. All such ideas have not come from management—alert employees in all phases of industry have also contributed heavily.

The *Honeywell Circulator*, a house organ, is used to dramatize employees' suggestions in action. A typical story tells how a maintenance man devised a means of heating part of the plant by using previously useless steam from the turbine exhaust.

The story of worker accomplishments should be told to the public.

another firm's suggestion system. The lead: "Ten thousand Westinghouse Electric Corp. employees earned \$295,905 in suggestion



awards during 1957, the largest amount paid during the 48 years the suggestion system has been in operation."

GETTING TOP-MANAGEMENT INTEREST

The third necessity for a successful suggestion system is securing and maintaining a high degree of top-management interest in its importance and value.

To stimulate and maintain this interest, top management must receive regular reports of the accomplishments of the program. General Motors Corp. accomplishes this by distributing to top management in all divisions a detailed annual report of the over-all results of the suggestion program. It is called "GM Suggestion Plan—Corporation Highlights," and it includes division and unit standings. In addition, reports showing actual or estimated savings resulting from adopted suggestions are sent to members of top management on a quarterly basis.

A.C. Spark Plug provides top management with a program progress chart at the general manager's monthly staff meetings. Percentage of employee participation, the number of suggestions received, and the percentage of suggestions that have been adopted are included on the chart.

A special publication, *Suggestion Programs Review*, provides top management at the Ford Motor Co. with information on program results, descriptions of outstanding suggestions, and statements about their own suggestion systems from members of top management in other companies.

To insure the success of the program, both employees and supervisors must be aware that top management is interested and wants new ideas.

Ford employees knew top management was interested when they received a letter from a division head saying, "We would especially appreciate your ideas on work simplification, improved reporting, reducing costs of supplies, and finding better ways of obtaining greater accuracy in our work."

The interest of top executives can also be shown by their participation in awards ceremonies, their consideration of awards when making promotions, and their attendance at meetings of suggestion

committees. No matter what type of promotion is used, be sure top management's interest is clear to all employees.

OBTAINING SUPERVISORY SUPPORT

The last important phase of a workable suggestion plan is gaining the strong support of supervisors in encouraging the full use of the ingenuity and skill of their employees. Many suggestion administrators call this the keystone of the program, for it can determine its success or failure as a useful contributor to the organization.



Supervisory cooperation encourages men to participate.

Illinois Central R.R. recognizes the supervisor's importance in the program by rotating middle management and supervisors every six months on suggestion committees. Ford Motor Co. also has supervisors attend committee meetings on a scheduled basis.

A schedule of personal contacts with individual foremen is employed by the administrator of the A.C. Spark Plug program. The foreman is informed of the progress of the program in his department, and he is given an analysis of the suggestion performance of his employees. This personal approach to foremen has shown good results.

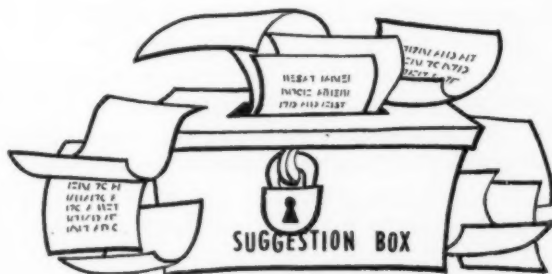
Periodic letters from top management to supervisors is also productive in keeping them informed of topside interest in the program and in soliciting continued emphasis and support. Quarterly reports to supervisors indicating the suggestion activity of their units in relation to the organization at large lends a spirit of competition, and many supervisors react very favorably to the challenge presented.

The U.S. Army Ordnance Corps has gone a step further. The suggestion activity of civilian supervisors is given due weight as a factor in the promotion policy.

General Mills' booklet, *How General Mills' Suggestion System Can Help You*, points out how supervisors can use the system to their own advantage, suggests new ways for them to obtain participation by their employees, and supplies "thought starters" they can use in discussing the program with employees.

Letters of commendation are fine promotional tools. Foremen of the Buick Motor Division whose employees have received suggestion awards during the month receive a letter similar to this from the general manufacturing manager: "These are days when few things are more important in industry than effective and forward-looking leadership—the kind of leadership that includes among its many qualities the ability to inspire cooperation in others. To me, one outstanding demonstration of this leadership on the part of Buick supervisors is the way in which so many, like yourself, are encouraging their employees to participate in the Suggestion Plan. The leader who can enlist the interest of his employees in helping discover improvement opportunities is multiplying his own efforts by that much."

No matter what promotional ideas you may have for your suggestion system, they should consider employees, top management, supervisors, and the public. The successful plans now used in industry are being presented through a variety of media and techniques. They are fresh, lively, attention-getting, and stimulating. And they are promoted constantly—with imagination and enthusiasm. ♦



**Using
Value
Analysis
for
MORE
PROFITABLE
PURCHASING**



■ **Howard T. Lewis**

Professor of Marketing (Emeritus)

Harvard Graduate School of Business Administration

WITH THE RECOGNITION of the principle that purchasing constitutes a major function of business management, the purchasing department has acquired an increasing amount of responsibility for getting the right quality of materials, parts, and supplies at the right time and for the right price. (Precisely what these terms mean is sometimes a little vague, but the general idea is clear.) A great deal of purchasing literature have become available; educational courses in colleges and elsewhere have increased tremendously in number and quality; purchasing agents' associations have grown in maturity, membership, and influence; and a substantial body of generally accepted purchasing principles have evolved. "Purchasing as a service" has been discarded in favor of "Purchasing for profit." Mathematical formulae, designed to reduce the areas within which unaided human judgment must function, have been derived. And, of course, we have begun to hear a great deal about value analysis.

It is now generally accepted that there is an inherent relationship among (1) engineering, design, material, chemical, and other specifications, (2) inventory requirements and availability, and (3)

cost. What constitutes best quality—and therefore best value—is as much conditioned by procurement considerations as by any others. This principle projects the purchasing officer directly into the product picture.

The acceptance of this generalization has two significant implications, one from the standpoint of general management, and one from the standpoint of the purchasing agent.

TOP MANAGEMENT SUPPORT

Experience has made amply clear that unless top management is thoroughly convinced of the desirability of any planned program of value analysis and fully supports it, the results achieved are likely to be something less than satisfactory. There are three reasons why this is true.

1. The successful balancing of technical with market factors is determined by the over-all product policies of the individual company. For example, if the company is trying to establish a reputation for reliability with a mechanical product that is subject to hard usage, a campaign of cost reduction must take second place to a program of technical development. If, on the other hand, the company is trying to expand its share of the market with a household article sold on a price basis, a program of value improvement directed toward a reduction of the cost of manufacture might mean the difference between success and failure. The character of the company's product and sales policy is determined by top senior executives.

2. The coordination and integration of the various functional activities of the company and the proper meshing of the objectives and operations of these separate activities can only be accomplished by top-management executives—indeed, in the last analysis, by the president himself. This coordination and cooperation is essential to any successful value-analysis program.

3. This balance and coordination must be achieved within the administrative environment of actual working conditions among the engineering, production, and procurement personnel. For example, engineering personnel are prone to resent suggestions from non-engineering personnel as an invasion of their prerogatives, a reflection upon their competence, or an attempt to take over some part

of their responsibility. On the other hand, the purchasing agent cannot always understand why a perfectly simple and, to him, obvious improvement in product design or process should not be welcomed by the engineer if its adoption will result in cost saving. Such personnel problems are ever-present, and they must be resolved through top management's efforts if a value-analysis program is to produce worthwhile results.

THE ROLE OF THE PURCHASING OFFICER

The second implication following from the principle that "best value" is based on an integral interrelationship of technical and procurement considerations is that the purchasing executive is bound to play a most important part in the determination of what is best value, since it is he who is primarily responsible for its purchasing aspects.

As this responsibility has become increasingly important, management has demanded more of its purchasing personnel. Changes have been made in selection, training, and procedures, with emphasis on recognition of the value of good suppliers, better techniques of negotiation, the wisdom of more careful price analysis, and the need for sound departmental organization and administration. Purchasing agents, in turn, have increasingly demanded the right to challenge design and specifications.

Many purchasing men have become fully qualified and equipped to cope with these responsibilities; yet many buyers are not quite qualified to meet the challenge, either through a lack of the proper training and experience or because of intellectual limitations. Moreover, even when the purchasing officer is qualified, he often lacks the time to conduct the type of analysis and research that are demanded. To make matters still more difficult, the advances being made in the world of science and technology are so great that it would be impossible for one man to keep up with them even if he could devote his entire time to the task.

Faced with this situation, and with their attention directed to the dramatic results achieved by others who have tried the device, the heads of many purchasing departments have sought a solution by adding a so-called value analyst to their organization. The prominence given to value analysis in educational and associational pro-

grams, the benefits derived by such companies as Ford and General Electric, and the widespread publicity given to their experiences with value analysis—all have played a part in emphasizing that there is something distinctly worthwhile in this whole venture.

WHAT IS VALUE ANALYSIS?

In spite of this, there is a great deal of confusion about exactly what is meant by value analysis. A little scrutiny of the various comments made by proponents and practitioners of this technique, particularly when supplemented by even a superficial examination of company programs in actual operation, makes it perfectly clear that "value analysis" means different things to different people. Because such programs, if they are to be successful, must be adapted to the needs and facilities of the individual company, it is to be expected that substantial differences will appear.

Moreover, in a larger sense, value analysis is little more than a new name for an old concept—that of greatest possible value in return for money expended. Efforts to improve the efficiency and simplicity of designs, search for new materials better suited to the purpose intended, experimentation with new processes—all of these have long been recognized by engineers and sales personnel alike as goals.

Even for the purchasing agent, there is nothing in the concept that has not always been considered a part of good purchasing. Value analysis involves questioning specifications as they come from the using department whenever they appear incomplete or too exacting, or when a special specification could give way to a standard one, or when a lower-cost material could serve the intended use equally well. There is nothing novel in this, nor in the idea of a purchasing agent working with a vendor with a view to making suggestions whereby the latter's costs and hence his prices might be reduced without sacrificing profit. Conversely, the alert buyer has always welcomed suggestions from the vendor aimed at improving the purchaser's product or lowering his costs. And purchasing agents have always been presumed to watch basic economic trends as well as day-by-day fluctuations in price.

Yet after all these concessions have been made, one outstanding fact remains, and this is truly fundamental: The new element in

value analysis is the emphasis on development of *planned programs*: (1) to emphasize particular aspects of value, (2) to coordinate efforts to achieve worthwhile objectives, and (3) to maximize the results through proper supervision and direction.

OBJECTIVES OF VALUE ANALYSIS

Just what are the aspects on which a value analysis program concentrates? Specifically, what are the objectives of such a program?

Most value analysis programs are designed to handle one or more of three broad types of projects that might be designated as (1) procurement research, (2) price and cost analysis, and (3) product analysis.

Procurement Research

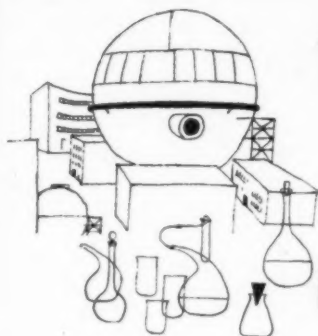
The first of these three types is procurement research. This is almost wholly an intradepartmental activity, involving little contact with other units in the company. Its purpose is to conduct, in a wide variety of areas, studies that buyers seldom have the time to undertake. One of these, for example, might be a study of important trends in material costs that may not be evident to operating personnel working with the details of individual problems. Such a study would deal with summary data—price curves, usage patterns, supply-demand relationships—for groups of materials, rather than investigating particular contracts or designs.

Such research units can perform a most useful service if properly manned and held accountable for reasonable, definite results. This kind of broad economic research often goes by the name of "value analysis."

Cost and Price Analysis

A second type of program commonly referred to as value analysis is cost and price analysis. The object here is to provide the buyer with a battery of cost and other data, on the basis of which he can more effectively negotiate a fair price—and, presumably, a lower one. In practice, reductions in price are likely to be confined largely to items already specified by the technical personnel, rather than

(Continued on page 77)



The 1906's—

A FORECAST OF THE TECHNOLOGY

By Francis Bello

Condensed from Fortune

IN THE DECADE of the sixties, man will finally soar beyond the thin film of the earth's atmosphere in which he and all his ancestors have been imprisoned for a billion years or more. Before 1965, almost surely, one of the multi-ton satellites thrown aloft by Project Discoverer, or its Soviet counterpart, will carry not a mouse or a monkey but a human. The next target will be the moon.

Meanwhile, throughout the sixties, space technology will keep feeding back a wealth of engineering ideas that can be put to use in hundreds of unforeseen ways throughout industry. Like the atomic-energy quest, the space venture will confront scientists and engineers with a host of new and baffling problems. The effort to solve them will broaden and deepen man's understanding of nature and extend his control over the materials and forces of the physical world.

It is this growing mastery of energy and matter that gives the American market so much of its

prodigious variety and thrust. The market's future vitality is guaranteed by the huge sums—federal and private—being invested in research and development. In 1950 the nation's R&D expenditure was less than \$3 billion. Last year R&D spending had zoomed to \$10 billion, with half the funds provided by the government. For the entire fifties, the R&D expenditure will add up to \$60 billion. In the sixties, the U.S. will easily spend twice that sum. This is exponential growth in precisely that area of human activity that exerts the greatest impact on the economy and on society as a whole.

The nation's R&D outlay has grown so huge, indeed, that one leading economist, Fritz Machlup, has recently suggested that part of the money might more profitably be spent elsewhere—on education, for example. There is no doubt, in any case, that the division of the total expenditure between basic research and development has become inexcusably lopsided. Out of 1958's

Fortune (January, 1959), © 1958 by Time, Inc.

\$10 billion, no more than \$750 million went for basic research in all fields—and even this sum was heavily skewed in the direction of nuclear and subnuclear physics. Meteorology, geophysics, oceanography, and the various life sciences (e.g., biochemistry, genetics, psychology) have all been seriously underfinanced. Leading American scientists are determined to see that U.S. science develops in a much more balanced fashion over the next decade than it has in the past.

The sixties should make crystal clear to every industrial research laboratory—if any are still in doubt—that there is no way to isolate technology from basic science. The two form a continuous spectrum ranging from the most prosaic product engineering to the most esoteric basic research.

In the sixties, for example, the technological subtlety of synthetic polymers and transistors will begin to be felt in a wide variety of consumer products. There will be home appliances using ultrasonics, refrigerators with no moving parts, and lighting systems without heated filaments or glowing gases. Most of the big electrical and electronics firms are working intensively on one or more of these developments, and there should be important commercial results in the early sixties.

During the sixties, much research will go into methods for obtaining fresh water from saline waters, either from sea water itself, or from brackish waters of lesser salinity. Last year Congress authorized the Department of the Interior to spend up to \$10 million building five experimental

desalting plants, two of which at least will have a capacity of a million gallons a day. Coalinga, California, has ordered the first desalting plant to provide municipal water in the U.S. The 30,000-gallon-per-day plant to be built by Ionics, Inc., Cambridge, Massachusetts, will use plastic membranes that let fresh water pass through but not salt.

While municipal water companies are watching the progress of desalting, electric utilities will be following closely the progress being made in thermoelectricity. This process turns heat directly into electricity by exactly reversing the principle of the new electronic refrigerator.

U.S. utilities will also be participating in the nation's costly atomic-power program. Proof that the atom can compete with fossil fuels in most of the U.S. is no better than a long shot for the late 1960's.

After years of optimistic speeches and press releases, the AEC disclosed in November that it had begun an "agonizing" reappraisal to learn why the nuclear-power program was lagging. This news was given to the Atomic Industrial Forum by AEC Commissioner John F. Floberg, who pointed out that utilities were currently building 318 conventional generating stations, compared to a handful of nuclear-power plants.

Modern steam plants, even those not especially favored by nearby coal supplies, can produce power for 6 to 7 mills per kwh. Estimated cost of power from the most efficient nuclear-power plants now building in the U.S. is 50 to 100 per cent higher, with large uncertainties as to actual fuel and maintenance costs. The

principal uncertainties are two: how much power can actually be obtained from a given type of reactor, and how long will the fuel last? The sixties should answer these questions for the several types of plants now building and under design.

The "agonizing" reappraisal of nuclear-power progress is being accompanied by a similar appraisal of the outlook for early harnessing of fusion or thermonuclear energy. The Second Conference on Peacetime Uses of Atomic Energy, held at Geneva last August, brought out a spectacular display of U.S. apparatus for fusion research. But the conference papers on fusion disclosed that Russian, British, and U.S. scientists are all up against thorny problems for which no answers are in sight.

If any one factor were to be singled out as holding back progress in atomic power and other advanced technologies, it would be lack of suitable engineering materials—particularly, metals and alloys.

The problem in metallurgy is easy to state: there has as yet been no major breakthrough in metals comparable to the transistor in electronics, nylon in high polymers, or nuclear fission in energy creation. The quest for newer and better alloys goes on in empirical fashion, with relatively little scientific understanding to quicken the search. The result is that each year alloys get a little stronger and tougher, a little more heat resistant, and sometimes a little lighter, but no sensational advance can be expected until development is guided by deeper scientific understanding. Better metals would lead

to cheaper electric power, to lower capital costs in oil and chemical plants (which use lots of pressure vessels), and to wholly new processes using high pressures and temperatures.

In the field of high-polymer chemistry, another aspect of materials technology, the U.S. has relatively great strength. The fifties are closing with the tough new linear polyethylenes in volume production, and with polypropylene not far behind. These two plastics derive their strength and toughness from new principles of molecular ordering discovered in the U.S. and Europe within the last half-dozen years. Polymer experts believe that the full impact of these discoveries will not be felt until the sixties, when plastics will take over more and more jobs now performed by metals.

It is safe to say that few technical programs in the sixties will be held back by lack of suitable electronic mechanisms. Solid-state devices (transistors, diodes, cryotrons, masers, magnetic amplifiers and memory devices, and new "parametric" amplifiers) will increase the speed, sensitivity, reliability, and versatility of electronic equipment of all types. At the same time the urge—and the means—to make everything smaller and smaller will continue unabated.

These advances make it realistic for the first time to speak of a computer rivaling in complexity the human brain, with its ten billion switching and memory units called neurons.

The discoveries that will be made in the sixties by satellites and by unmanned space vehicles probing to

the moon, Mars, Venus, and to the vicinity of the sun are truly impossible to predict, but the space vehicles should have an impact almost immediately on daily life. Equipped with simple radio beacons operating on solar batteries, satellites will soon be serving as navigation aids. Their precisely calculated orbits will be handily available in almanacs. Equally soon, satellites will keep the whole world's weather under surveillance. They will transmit to earth simple pictures of shifting cloud patterns, together with a detailed energy survey, showing how much of the sun's heat is absorbed and how much is reflected back into space. Once information of this sort has been correlated with the earth's weather, meteorologists should make dramatic improvements in their forecasting techniques. A target for the

late 1960's: accurate ninety-day weather forecasts.

There seems little likelihood that space technology will be starved for funds in the years ahead. One of the biggest unknowns for the sixties will be the level at which the U.S.—especially the government—will support basic research in medicine. By every criterion, the U.S. ought to be spending a great deal more on biological and medical research than last year's estimated \$400 million.

It would be rash to predict for the sixties fundamental cures or prophylaxis for any of the outstanding medical problems—coronary and atherosclerotic disease, cancer, or mental illness—but the decade should certainly see major advances. And it could well see a substance to control essential hypertension, as insulin controls diabetes. ♦

Uranium Prospecting—The End of an Era

WHAT HAS BEEN the most spectacular road from rags to riches since World War II is now closed. No longer will the beep of Geiger counters, clutched in the expectant hands of thousands of uranium prospectors (mostly amateur), be heard in the land. The reason: The Atomic Energy Commission has announced that it will no longer guarantee a market for newly discovered uranium deposits.

The AEC, which has paid \$8 a pound for all uranium produced, has tried to slow the rapid growth of the industry (now running at a \$250 million yearly rate) for more than a year, even though domestic output accounts for only half of the agency's needs. It gets the rest of its ore from the Belgian Congo, Canada, Australia, and South Africa, under firm contracts signed before the vast western reserves were discovered.

This ruling doesn't hurt companies with proven reserves; in fact, it may help them by restricting future ore supplies. But as Jess Larson, president of the Uranium Institute of America, has said, "For the individual prospector, the romance is over. The door is closed."

—*Business Week* 12/8/58



Raising Employee Productivity

A Survey of Company Practices

Condensed from Personnel Policies Forum

HOW CAN EMPLOYEES most effectively be motivated to cooperate with management's efforts to raise productivity? There are many methods, and they meet with varying degrees of success, judging from a survey of 114 companies that was conducted recently by the Bureau of National Affairs. Here are some of the most common:

Human relations programs. Nine-tenths of the companies surveyed believe that human relations programs have a significant effect on productivity, although some of them point out that it is difficult to supply proof of this belief. Virtually all, however, add that much depends on the kind of program and the way it is administered. One personnel manager, for example, points out that "a program must be more than surface deep—it must induce attitudinal changes."

Employee benefits. There is less unanimity about the value of employee benefit programs as motivators of productivity: less than three-fifths of the respondents think them effective, nearly two-fifths do not, and the remainder are doubtful about their value.

Those who do see a positive correlation between employee benefits and employee productivity seem to attribute this chiefly to the effects of the benefits on morale and company-employee relationships.

The sizable minority who think that benefits in themselves do not increase productivity argue that (1) once given, a benefit is soon taken as a matter of course; (2) employees tend to think of benefits as something to which they have a right; and (3) liberalized benefits can make an employee happier without making him more productive.

Personnel Policies Forum (December, 1958), © 1958 by The Bureau of National Affairs, Inc.

Pay, supervision, and communications. In motivating employees to greater productivity, what is the comparative importance of (1) size of the paycheck, (2) quality of supervision, and (3) management's effectiveness in getting its point of view across to employees? Highest rating was given to quality of supervision by 67 per cent of the companies; effectiveness of communications, by 41 per cent; size of paycheck, by 28 per cent. This does not mean, however, that executives place these factors in three separate categories of importance; on the contrary, more than half of the respondents grouped their answers, considering two factors (usually supervision and communications) of equal importance. Another 9 per cent think that all three are equally important.

Discipline. Is disciplinary action effective in handling the problem of the low producer? Half the executives questioned say yes; a third say no; the rest answer with a qualified yes or no, or by saying "sometimes." Those who do find discipline effective range from enthusiastic to tepid in their endorsement. Generally speaking, larger companies (over 1,000 employees) appear to have more faith in the effectiveness of disciplinary action than do the smaller companies in the survey.

Group approaches. An important aspect of employee behavior is the tendency to act in ways that are believed to be acceptable to other employees. The executives questioned were asked whether they consider this tendency to stick together an obstacle or an aspect of group behavior that can be utilized to raise pro-

ductivity. Those who feel that it can be utilized outnumber those who consider it an obstacle by nearly four to one. A smaller number (8 per cent) believe that the answer to this question depends on the particular circumstances involved.

Those who consider employee "stick-togetherness" an obstacle cite the fact that this tendency sometimes leads employees to resist efforts to raise productivity, and they believe that an individual approach to motivation gets the best results.

The majority of executives questioned, however, find this tendency useful as a means of raising productivity. Some of these executives merely say that they've tried working through the group, and that it has worked for them; others go further and say that a company cannot afford *not* to work through the group. And still others not only point out the merits of the group approach, but express the conviction that trying to work through individuals may put these persons on the spot with their fellow employees and create suspicion of the company's motives. It is noteworthy that many executives stress the importance of good supervision in achieving higher productivity through the group approach.

Incentive systems. There is little doubt in the minds of the executives surveyed that incentive systems are effective in increasing productivity, even though most respondents think there are plenty of headaches in administering them. Four-fifths of the companies in the survey consider incentives effective; less than a sixth do not. Those who believe in incentives seem to feel that you can't expect

employees to take much interest in higher productivity if they don't share in the benefits.

Incentive plans can give management a lot of trouble, however, and the respondents frequently wonder whether the admitted benefits outweigh the disadvantages. Among the most frequently cited objections and disadvantages are these: an incentive system increases the number of grievances; causes employees to conceal ways of increasing production for fear rates will be tightened; creates friction between union and management or among employees; causes employees to skimp on quality; and discriminates against indirect operations. Many executives stress that sound administration and high quality of supervision are indispensable if such programs are to do any good.

Supervision. On the question of what kind of supervision best promotes employee productivity, executives who favor detailed working instructions and a close check on performances are outnumbered two to one by those who favor more general instructions and major emphasis on objectives and results. Closely related to this is the viewpoint of nine-tenths of the respondents who feel that a policy of decentralized authority, with maximum initiative and responsibility given to supervisors at all levels, provides the setting supervision needs in order to work effectively toward the goal of greater productivity. Executives' responses indicate that such a policy is pursued by almost four-fifths of the companies in the survey.

Specific techniques. What are some of the specific things a company

can do to raise the productivity of its employees, and which of these methods has been found most effective by companies that have tried them? The methods most frequently employed include improved selection of employees (by 88 per cent), better working conditions (84 per cent), human relations training for supervisors (76 per cent), job simplification (63 per cent), use of communications media (59 per cent), suggestion systems (41 per cent), job enlargement (38 per cent), job rotation (37 per cent), and profit-sharing plans (14 per cent).

How well do these methods work? The proportion of executives who find them effective range from 44 per cent in the case of suggestion systems to 92 per cent for job simplification and improved methods of selecting employees. It is interesting to note that the fact that relatively few companies have tried a method may be no argument against its effectiveness. For example, only 37 per cent of the companies make use of job rotation, but 70 per cent of those who do report it effective; similarly, job enlargement has been tried by only 37 per cent, but it has been found effective by 92 per cent of the firms that use it.

Obviously, it is difficult in many cases to measure the actual impact of any action on productivity, or even to be sure that a rise in productivity can be attributed to some action taken by management. Nevertheless, the substantial margins by which respondents endorse the effectiveness of most of these measures suggests that they are satisfied that their efforts are being adequately rewarded. ♦

Are Inflation Pressures Under Control?

By Jules Backman

Condensed from *Nation's Business*

WARNINGS that we are about to experience a new substantial inflation are tempered now with statements that the immediate prospect is for a lessening rather than an increase of inflation dangers. An analysis of the forces now at work will help to keep the picture in focus.

Psychological factors. Underlying the present fear of inflation is a conviction that the combination of fiscal inflation, wage inflation, and a national concern over full employment could provide an irresistible combination. The failure of prices to decline in the 1957-58 period tended to reinforce this belief, and the easing of mortgage and installment credit terms also pointed in this direction.

It is claimed that these factors have created an inflation psychology. What is the evidence that such a psychology exists today?

Certainly, no such evidence is available in the actions of consumers or of businessmen. Neither retail sales nor inventory policies have indicated a flight from money. In fact, the only area where inflation psychology can be detected is in the securities markets, where many stocks and some of the stock indexes have moved above the peaks of the summer of 1957.

Even in that area, however, it is not quite clear to what extent the rise in stock prices represents an

optimistic appraisal of the magnitude of business recovery and to what extent a flight from money. Similarly, it is not clear to what extent the decline in bond prices reflects tightening money and a reaction to the speculative boom of last spring and to what extent it is a flight from fixed income securities because of fears of inflation.

Price trends. Most of the headlines dealing with prices have been devoted to new monthly highs in the consumer price index, but less attention has been given to the fractional nature of these highs. Between August 1957 and September 1958, for example, the consumer price index rose only 2.2 per cent. Most of this rise had taken place by March, so that, between March and September, the index actually advanced only three tenths of 1 per cent.

The trends of wholesale and retail prices have not yet reflected a new inflationary price spiral, and upward pressures seem likely to be less in the next few months. In much of the postwar period, there has been an insistent demand for products to overcome the shortages built up during World War II and, on a lesser scale, during the Korean War. We no longer have large backlogs of deferred demand, which create strong upward pressures on prices.

American industry built a record

Nation's Business (December, 1958), © 1958 by *Nation's Business*—the Chamber of Commerce of the United States.

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volume of plant and equipment during the 1955-57 boom. In many instances, the current capacity far exceeds peak levels of demand in the past. Thus, while a considerable volume of plant and equipment will be built for modernization purposes, there will be less eagerness to expand total capacity as such, and hence less pressure from the demand side for price rises.

Farm prices, too, have begun to decline. The current agricultural crop is the largest we have ever had; it is estimated that the output is about 10 per cent above the peak years of 1948, 1956, and 1957. Large supplies of farm products usually are reflected in lower prices—and some declines have already taken place.

This large farm crop has one inflationary effect, however: it requires larger government expenditures to support prices. Approximately one-fifth of the increase in the federal deficit is attributable to higher expenditures for agriculture. Nevertheless, owing to modifications of the federal price support and loan programs, the net effect will probably be somewhat lower prices for farm products.

Wage inflation. The most important pressure on costs and prices during the 1955-57 period was the increase in labor costs at a more rapid rate than national productivity. In the manufacturing industries, for example, output per man-hour rose by only four tenths of 1 per cent in 1956 and eight tenths in 1957—substantially below the long-term rate of gain. In contrast, average hourly earnings in manufacturing industries rose 5.3 per cent in 1956

and 4.5 per cent in 1957. If various nonwage benefits are included, the percentage increases are even larger.

But the substantial pressure on prices that is created when increases in labor costs exceed gains in output per man-hour is likely to be somewhat less in the year ahead. Business recovery is usually conducive to greater gains in output per man-hour as the rise in employment tends to lag behind increasing output, and there is evidence that this is true of the current recovery.

Although precise data are not available, the recent automobile settlement appears to have increased total labor costs by about 4 per cent—less than in the 1955-57 period. Although this still exceeds national gains in output per man-hour, the net rise in unit labor costs appears likely to be smaller than in recent years. Hence wage inflation, while still a factor, could be less important than it has been.

The budget deficit. The fact that the federal government is faced with a large increase in deficit financing is the most important single factor behind our present fear of inflation.

The government's budgetary deficits are among the most powerful creators of inflation. However, it is not the effect of a single budget which is important; rather it is the manner in which the price inflation created by such deficits leads to new increases in government expenditures, and thus to bigger and bigger deficits as spending outpaces tax revenues. It is this spiral which has created the most serious inflationary consequences in the past.

A budget deficit of more than

\$12 billion, such as that projected for the current fiscal year (July 1, 1958, to June 30, 1959) is a serious matter, but *how* inflationary it will be depends largely on how the financing of it affects our money supply.

There have been only moderate changes in the volume of demand deposits and in money in circulation in the past two years: between August, 1957, and August, 1958, total demand deposits and currency increased by only \$2.7 billion, or 2 per cent. A smaller rise took place between August, 1956, and August, 1957. Thus, our money supply has been expanding at less than the 3 per cent long-term rate. However, the financing of the federal budget deficit will inflate the supply of money and credit to the extent that new government securities are sold to the banks.

The present outlook is for the commercial banks to carry the major burden of this financing. Even if the banks finance the entire budgetary deficit, however, it is not certain that there will be an equivalent rise in money supply. Much of the \$8 billion increase in the commercial banks' holdings of government securities in

the year ending August, 1958, did not result in larger demand deposits. However, total time and savings deposits increased by \$10 billion during that period. To the extent that these government securities can be sold to others rather than to commercial banks, the attending inflationary pressure would be reduced.

Meanwhile, some of the danger in this area will be sharply reduced as a result of business recovery. The increase in the deficit projected for the current fiscal year results from a decline in revenues (\$2.1 billion) and an increase in expenditures (\$7.3 billion). For the following fiscal year, the projected deficit is cut in half, largely because of an anticipated rise in tax revenues. The projected large deficit, then, is not expected to pyramid into a still larger deficit in the following year if government spending for 1959-60 can be restrained.

Through its favorable impact on tax revenues, as well as on the net flow of cash into the unemployment insurance and other funds, the business recovery should be an important factor acting to moderate the threat of inflation. ♦

TENNIS, ANYONE? In the not-too-distant future, millions of Americans will be "leisure stricken," rather than "poverty stricken." This prediction of Dr. Boris Pregel, president of the Canadian Radium and Uranium Corporation, was recently reported in *The New York Times*. We'll have a 20-hour week, he says, tremendous production, and a virtually unlimited food supply derived from the cultivation of algae. But because social progress will not keep up with the technological development, he adds, resources for the use of leisure time will be insufficient to meet the needs of people who formerly depended on work to fill up the greater proportion of their lives.



INDUSTRY TIGHTENS UP ON EXPENSE ACCOUNTS

By Art Zuckerman

Condensed from *Dun's Review and Modern Industry*

LLOUD GROANS from businessmen already overburdened by tax accounting requirements greeted the recent tightening of Internal Revenue regulations on expense account spending. The reaction was natural enough—the last thing most businessmen have ever asked for is more stringent interpretation of the federal tax laws.

Nevertheless, some companies are beginning to find that they can profit, if only in a backhanded way, from certain rather pugnacious pronouncements by the tax authorities. For these statements, coupled with pressures generated by the recession, have forced them to make a long overdue reappraisal of their expense account practices.

The government kicked up its biggest recent furor in the business community toward the end of 1957. That was when revenue agents ruled an employee must report as income any money given him for expenses, and then put down his actual expenses as deductions.

When the Internal Revenue Service backtracked last March and required only the declaration of expense money received on a flat-allowance basis, it was to some extent restoring the status quo. Keeping flat allowances in the tax-free category had been difficult even earlier.

When the smoke had cleared from the tax-deduction furor, one fact stood out: from now on, anyone—corporation or individual employee—who reports business deductions would be well advised to document them and particularly well advised to prove a resultant benefit to the company.

In many instances, however, the business community may have beaten the government to the punch. Increasing competition, rising costs, and declining markets have forced industry to take a new look at all its cost factors. For a good many companies, the expense accounts have seemed as good a place as any to begin.

Dun's Review and Modern Industry (October, 1958), © 1958 by Dun & Bradstreet Publications Corporation.

Nearly 100 firms responded to a DR&MI survey of current expense account practices. The companies surveyed are engaged in activities ranging from mining to brewing, from publishing to the manufacture of such items as aircraft, office equipment, food products, machine tools, home-entertainment products, and photographic supplies. They employ from 250 to over 75,000 persons.

A substantial number—in fact, nearly half of those participating in the survey—are doing something about expense account charges. They are looking for ways to reduce these expenses, and in many cases tightening up the internal reporting of them. With one eye on the Internal Revenue Service, a significant number, including concerns that are doing nothing else about expense accounts, are having more bills charged directly to the company through a variety of credit plans.

Better than 21 per cent of the survey responses—representing almost half the companies committed to cutting personal expenses—have tightened up their expense account reporting procedures. Greater detail is almost universally demanded. Some companies that never did so earlier are requiring executives to have their expenses approved by a superior. And superiors are scrutinizing expense reports more closely.

Supporting data in the form of hotel bills and the like are being required in an increasing number of cases. Prompt reporting is another new rule in some instances. One concern now requires that expense reports be submitted within three days of the completion of a trip.

Even where bills are charged directly to the company, controls are tightening. For example, one company reports, "If hotel bills or transportation bills are charged directly to the company, these bills are referred to the individual executive, and he is requested to approve the charge and indicate on the face of the bill for whom and for what reason it was expended."

One of the more interesting phenomena growing out of the Internal Revenue Service's heightened interest in business expenses has been the increased use of credit plans and direct billing of companies.

Close to 15 per cent of the concerns responding to the survey report they are making more direct payments for such things as airplane fares, railroad fares, hotel bills, automobile rentals, gasoline, and club charges. There seems to be a growing use of credit cards for restaurants, and one small manufacturer has gone so far as to arrange to have automobile repairs charged directly to the company.

Actually, under the current rules of the Internal Revenue Service, even expenses charged directly to a company must be handled as if they were disbursed to the employee—if that employee is on a flat expense allowance for which he doesn't account. For example, if an executive on a flat allowance charges a hotel bill on a company-held credit card, he must include the amount of the charge as gross income on his tax return and then deduct it as a business expense.

Even in such a case, however, credit card companies will tell you they offer a valuable service because

their billing gives a detailed breakdown of expenses and provides the kind of solid documentation now demanded by increasingly scrupulous tax examiners. Furthermore, they point out, in any kind of expense account situation consolidated payments are less troublesome than a series of disbursements to a number of individual employees.

Among the companies surveyed, three key target areas are being singled out in the drive to reduce expense account charges. One is entertainment costs. Another is expenditure per trip. The third is the extent of travel.

Close to 16 per cent of the companies that are striving to reduce expense account charges singled out entertainment as a fine place to economize. Says one company, "Efforts have been made to reduce possibly overgenerous expenditures on entertainment of customers and 'staff' luncheons or dinners not genuinely necessary."

Better than 11 per cent of the expense-cutting participants in the survey are endeavoring to do something about cost per trip. One manufacturer, for example, reports that "cheaper forms of transportation have been recommended, and extra-fare flights are no longer permitted."

But the biggest single economy step has proved to be the reduction of travel generally. Close to a third of the expense-trimming concerns polled have gotten in some of their biggest licks here.

For more than 13 per cent of the companies that have instituted strong expense-cutting programs, success has been sufficiently marked to be measurable. These have reduced business expenses anywhere from 5 per cent to as much as 35 per cent. Many others, who for one reason or another cannot gauge results quite so exactly, report that the savings that have been effected have been evident.

Nobody expects the cost squeeze to last forever, and every company looks forward to the day when the profit line again starts climbing to the top of the chart. What will happen to all these carefully worked-out expense account controls when that happens?

Nothing, in the firm opinion of more than 70 per cent of the survey participants who have set up such controls. A few, betraying a wry suspicion that human nature is unpredictable, say they're not quite so sure. One manufacturer put it this way: "When you look for large sales increases, and are making money, it is difficult to maintain control and obtain cooperation." ♦

THOSE MONDAY BLUES: Feeling depressed now and then is a perfectly normal thing, and particularly when it happens on Monday morning, according to a well-known psychologist. On Sunday, he explains, most people eat, work, and sleep according to a schedule sharply different from their normal one. This throws a person slightly out of gear, and the mild disorder that results is to blame for the feeling the next day that nothing is really worthwhile.

—Supervisory Slants

MARKETING RESEARCH:

POLL *or* PROBE

—OR BOTH?

By Gerhart D. Wiebe

Condensed from Printers' Ink

MARKETING RESEARCH may soon move another step forward. Two techniques whose relative merits have been vigorously debated—sampling research and motivation research—may end up by merging into one approach that will utilize the strengths of each and at the same time remedy the weaknesses of each. The result should be a happy one for marketing research.

The problem of population sampling is to find some consumers who will provide answers that add up to a fairly accurate representation of what would have been learned if all consumers had been questioned. The progress made toward scientific precision in the difficult job of drawing a representative sample has brought with it some limiting side effects.

First, it has spawned a sampling fan club which, like other fan clubs, is a mixed blessing. The members of the fan club are convinced that population sampling has arrived at a state of perfection. They would rather not face a simple truth—namely, that all population samples in current marketing research, including the several variations of probability sampling, involve modifications, compromises, and elements of judgment on the part of the statistician.

This attitude has impeded progress

by ignoring the obvious fact that deciding whom to question is very far from the whole answer to the problems posed by marketing research clients. The prestige of population sampling has sometimes fostered a tolerance of mediocrity and even of thoughtlessness in the areas of what questions to ask, how to ask them, and what good the answers would be to the client once they were compressed into columns of percentages.

A comparable narrowness in the midst of very real achievement appears to exist in motivation research.

How did motivation research gain a foothold? A major part of the explanation seems to lie in the very weakness of sampling surveys just discussed. The motivation researchers moved into the vacuum left behind in the areas of what questions to ask, how to ask them, and how to understand the answers. Clients sensed the freshness and vitality of the answers to motivation researchers' new and penetrating questions. Few buyers of motivation research would claim that the findings from these studies have been uniformly useful, systematic, or free of ambiguity. But for all that, motivation research findings have been stimulating and provocative.

Sampling researchers observed that no matter how fresh and vital these

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"new fangled" MR findings were, they weren't much good if they weren't true. By "true," a sampling researcher means "representative of," or "projectable to," the whole population from which the sample was drawn. It appeared then that sampling researchers had only to wait a reasonable length of time before motivation researchers, with their local samples of 100 or less, would prick their own balloon by delivering misleading and incorrect findings to their clients. But in spite of its indiscretions and purple language, MR's debacle has not occurred.

The basic reason is that while there's a great deal of variety in people's behavior, there's also a great deal of similarity. A sensitive investigator, examining a few people intensely, can generally find at least ripples and eddies that correspond to the currents and tides that flow through the general society.

But there is a catch: the motivation researcher is not sure whether his small-sample findings represent a ripple or a sweeping tide in the market place. This is one important reason why applied MR findings have proven highly successful in some campaigns and quite unsuccessful in others. The findings, in all instances, may well have been equally accurate, but some represented "tides" while others represented "ripples." You can't tell which is which without population sampling.

The MR fan club members (motivation research has its fan club, too) prefer an uncritical illusion to the "ifs," "ands," and "buts" that complicate the real but qualified achievements of MR. The MR fans tend to

put their faith in plumbing the depths of the psyche, exposing the primal drives of the unconscious, tapping the irrational powers that sweep mere "conscious" decisions before them like so much chaff.

Those are the basic weaknesses in each of the two major approaches to marketing research. What will be the corrective and strengthening effects of combining the two schools of thought?

Motivation researchers offer rich and stimulating ideas for extending the productiveness of sampling survey interviews. They get whole categories of information that traditional sampling surveys generally pass over. Motivation research extends the range of questioning; it adds a new dimension to sampling. Sampling researchers sample a population. Their sampling theory has nothing to say about what to ask a person once he is chosen to be interviewed. Motivation researchers, on the other hand, sample the experience of each individual respondent. They explore numerous levels of reaction within the individual respondent—levels that generally escape the attention of sampling researchers.

Here is an example. In a study for a client whose organization sells a service, one of the chief objectives was to learn the major criticisms of the service. Interviewers told respondents that they would be asked about "both pleasant and unpleasant things" in their experience with, or what they had heard about the service.

After discussing the "pleasant" points, respondents were asked about the "unpleasant" ones. There were 42 per cent reporting something un-

pleasant, and the bulk of the criticisms fell about equally into two categories—one concerning general administrative arrangements (15 per cent), the other relating to the behavior of the client organization's personnel (18 per cent). The others, 58 per cent, reported nothing unpleasant. Interviewers then asked a question phrased as an incomplete sentence—a motivation research device in which the respondent is asked to finish the sentence when the interviewer stops in the middle. The incomplete sentence was: "I know they are busy and have lots of people to take care of, but it seems to me that they could at least . . ."

Over half of the 58 per cent who had reported nothing unpleasant now responded with criticisms, as did nearly all of those who had stated criticisms in the earlier question. The sentence completions of the former "Don't know" people were remarkably similar in content to the answers

given by the rest of the sample, and in both groups the criticisms relating to personnel now jumped to a ratio of four to one over criticisms relating to administrative arrangements. Furthermore, the personnel criticisms were given in much more vigorous language than were the earlier criticisms.

The incomplete sentence is one of many techniques that can be used profitably from time to time in marketing research. Word associations, picture matching, adjective association, and semantic differential can all be adapted to large sample surveys. Continuing experimentation in applying social science ideas to the solution of clients' problems will undoubtedly turn up additional useful techniques. And the continuing re-examination of what we think we know, as motivation and sampling techniques are combined, will also continue to sharpen our vision and increase the productivity of marketing research. ♦

Bringing the Experts Back from Pasture

AS MORE COMPANIES DISCOVER the senselessness of prejudice against older workers, it's not uncommon to find firms hiring older men for production or semiskilled jobs—and, occasionally, hiring a retired executive for a special assignment. But *Business Week* magazine reports that one company (Stavid Engineering, Plainfield, N. J.) has assembled a full-time roster of leading men in its field of electronics from the ranks of the retired. Called "senior scientists," these men draw salaries ranging from \$8,500 to \$15,000 a year—plus their retirement pensions. In return, they supply Stavid with a pool of know-how that would be unavailable from its own relatively young engineering staff.

Stavid finds that older men, thanks to "depression days work experience," show a better attitude toward their jobs than the junior employees; for example, they score better than the engineering force as a whole in such areas as attendance.

UNIONS IN THE OFFICE— *Coming Soon?*

Condensed from Office Management

OFFICE ORGANIZERS, until now the patient bit players on labor's stage (and until now not especially box-office with clerical workers), are suddenly finding themselves auditioning for starring roles. AFL-CIO casting directors are listening with greater attention to union economists who advise them to play to the office audience. Automation has been turning office workers into veritable production workers anyway, the reasoning goes, while at the same time it decimates the ranks of older industrial unions.

No less an impresario than Walter Reuther took care, recently, to spotlight the separate negotiations he conducted for UAW clerical workers at Chrysler. Delays in settling this contract kept Chrysler idle longer than its competitors in this latest round of auto-worker bargaining.

All this is not to suggest that office unions will suddenly materialize. Before office unions can grow, organizers must win battles on at least three fronts.

The first obstacle, of course, is labor's traditional antagonist, management. It's a big obstacle. Management prides itself on its enlightened approach now; indeed, it freely provides

employee benefits unheard of even ten years ago. It abjures the practices that blackened its name with labor and the general public in years past—short-sighted practices that nurtured the early strength of the unions in many industries and were probably the greatest single influence contributing to the rise of unions.

Labor must overcome a second formidable antagonist—*itself*. This is not merely a matter of cleaning out the racketeers and petty tyrants in its ranks. Actually, it involves profound rethinking of the role of unions in a changing society.

Thirdly, labor must overcome the ingrained reticence of office workers themselves. It has had a tough time, so far, convincing white-collar people that they really "need" a union. "Our biggest organizing problem here," a union official said last month, "is people's 'imagined potential.' Every \$60-a-week teller thinks he's going to be president of the bank."

In addition, organizers cite these reasons why office people balk at unionism:

Women. Organizers call this the "until problem." Women like to think they're only working until—until they get married, until they have a baby,

Office Management (January, 1959), © 1959 by Andrew Geyer-McAllister, Inc.

until they get the car or the house paid off, or until they get Johnny through college. Consequently, they're not too militant about schemes to protect their job rights or seniority, when they feel their jobs are only temporary anyway. And women represent nearly two-thirds of all office workers.

Youth. The October, 1958, issue of *Labor's Economic Review*, published by AFL-CIO, sums up the problem, from the unions' viewpoint, this way: "With each year, there are fewer individuals in the labor force who retain any memory of the hardships of the 1930's, when so many workers first recognized the need for union organization. The young worker starting out on a new job takes for granted wage standards and benefits which required many years of union efforts to achieve."

Taft-Hartley. By the actual wording of its clauses, but more by Labor Board interpretation, the Taft-Hartley Law has hampered the unionizing of office workers. Section 9(b)(1) says professional employees cannot be fitted into industrial bargaining units unless they vote separately that they want to be. Section 2 (1) says supervisors can't be in a bargaining unit and, to quote a labor lawyer, "one side effect of automation is to make everybody a supervisor." As the Labor Board reads these provisions, they apply to *technical* employees and *office clerical* workers as well. Both groups, the board has ruled, are entitled to separate elections before becoming parts of any industrial unions.

Why, then, with all these obstacles, should labor be so intent on organizing offices? In simplest terms, unions have no other choice, and for that

same familiar reason: automation and major technological change.

At a conference held April 22, 1958, under auspices of AFL-CIO's Industrial Union Department, Warren Woods, general counsel of United Papermakers & Paperworkers, enumerated these effects of automation:

"The first fact is that for the first time in our history the white-collar worker exceeds in number the blue-collar worker.

"The second fact is that the rate of increase in the composition of the work force of the white-collar worker is much greater than the rate of increase of the manufacturing or blue-collar worker.

"And the third fact . . . is that within the manufacturing sector alone, nonproduction workers are increasing at a rate fifteen times as great as that of the production workers in manufacturing."

The implication is plain. Unions must look to the office worker if for no other reason than membership. Automation will continue to erode union strength on the production side. But if organized labor is flexible enough and skillful enough, it can ride the automation wave and sweep along with it into the office.

One indication of a new seriousness in the union approach, and a compelling reason for a real effort to organize the office, came last year, with a warning to labor by Everett M. Kassalow, AFL-CIO research director:

"The great overriding problem is that of union organization of the white-collar and professional workers. In case anyone thinks this job of organization will take care of itself,

let me remind you that the last great civil war in the American labor movement occurred because the movement itself was unable to adapt its structure sufficiently to meet the challenge of organizing new types of workers—namely, the industrial workers in the great mass-production industries.”

In the speech from which this excerpt comes and in other recent talks, Mr. Kassalow has made these additional points:

1. Technological change means smaller bargaining units; it makes the job of organizing industrial unions a more difficult one. “The sheer physical necessity to counter the huge factory image of a River Rouge with a powerful workers’ organization is not so immediately evident to workers in the smaller, new plants. . . . Not only is it harder to organize smaller units, but the task of servicing them becomes more complicated.”

2. As the nature of work changes, the union’s role and organization must change with it. “This shift from manual to mental tasks will inevitably lead to changes in workers’ interests, needs and capabilities. . . . As a result of the shift in the nature of work, many workers caught up in this new job environment may begin to take more of an interest in the production process as a whole. Who will reach out to meet these new interests of workers? Will it be management or the union?”

3. In reorganizing, and to offset the effects of smaller bargaining units, the white-collar worker must be included, in a major way, in the labor movement. “Right now we ought to be finding ways and means of giving white-collar technical and professional

workers more direct representation on the bargaining committees in big industrial plants. . . . It may be necessary to organize special divisions or conferences within the big industrial unions so as to provide the white-collar workers with effective representation on policy matters at the international level. . . . Offhand, however, I do not think that in the United States it will be possible to choose the road of building separate professional and technical unions for many of these workers [as in Europe]. Economic power in America, to a considerable extent, flows along corporate and industrial lines. If white-collar professional and technical workers are to be effectively organized, they must somehow be grouped together in the great institution which industrial workers have already established to offset the great centers of corporate power—namely, the powerful industrial unions. . . .”

There are union officials, particularly in white-collar unions which have been around for some time, who cannot agree with Mr. Kassalow’s idea of grouping all types of workers in the big industries or in large corporations.

As a case in point, they cite Walter Reuther’s handling of negotiations for white-collar people at Chrysler. They charge that he didn’t win enough for them—that as an industrial unionist he was inclined to use the office as a convenient place for compromise. And officials of unions like Office Employees International point out that, after all, they know the white-collar field best.

In summary, then, unions must first straighten out among themselves

precisely how they intend to organize the office worker. Only then will management directly face this powerful force—as a powerful force—at the other end of the bargaining table. In the meantime, of course, management will feel the indirect influence of that power, if only as a *potential* limit to its freedom.

The stage is now set for the union act to emerge from the wings. Unless the unions completely garble their lines, and unless management can put on such a good show that no one buys a ticket to the union theater, chances are good that unionized offices will become a reality in the years ahead. ♦



MANUFACTURING COSTS ABROAD:



The Grass Isn't Always Greener

The National Industrial Conference Board

IS IT REALLY CHEAPER to manufacture abroad? Not necessarily, according to a comparative study of manufacturing costs here and in other countries recently completed by the National Industrial Conference Board. Although labor costs abroad are often substantially lower than in the U.S., the study reports that material costs—which represent the largest single component of total manufacturing costs—are frequently higher in foreign countries.

The study examines the foreign experience of more than 100 U.S. companies, the majority of which now produce the same commodities here and abroad. One hundred ninety-two sets of comparative cost data for ninety different manufactured products were gathered from U.S. firms in twenty countries.

Of the 192 comparisons, about 77 per cent showed lower unit labor

costs abroad; 57 per cent showed lower unit overhead costs abroad; but only 38 per cent showed lower unit material costs abroad. When these cost categories are combined, comparisons show that total unit costs in foreign countries are lower than their U.S. counterparts in 44 per cent of the cases, higher in 37 per cent, and about the same in 19 per cent.

Other highlights of the study reveal that:

- There appears to be a decided manufacturing cost advantage in most of the European Common Market nations.

- Unit costs also tend to be generally lower in the United Kingdom, Mexico, and Argentina, but higher in Canada, Brazil, and Australia.

- Productivity in U.S.-owned plants abroad is often substantially lower than in their counterparts here. Less mechanization, inferior equip-

ment, and poorer employee training are the reasons most frequently cited for the lag overseas.

- Material costs are not only the largest single element in the production cost dollar, but, on the average, take more than half of it in every country and nearly every major industry abroad that is covered by the report.

In general, the study finds that manufacturers whose products involve relatively large amounts of materials and small amounts of labor tend to operate at lower unit cost in America than abroad. Where labor and/or overhead are relatively more important in the cost-mix, operations are often cheaper abroad than here.

Material costs account for substantially more of total unit costs in foreign countries than in the U.S., the NICB finds. They take roughly 65 cents of the average production cost dollar abroad—about 12 cents more than in the U.S. The plants covered in the study customarily use the same materials in producing the same products, but those located abroad often pay higher prices for them. Frequently, too, necessary materials and component parts are not as available in foreign markets and must be obtained elsewhere at relatively higher cost.

As a contributor to the production cost dollar, overhead ranks next both here and abroad, according to the study. On the average, it is a smaller portion of manufacturing expense abroad than it is here—24 cents overseas against slightly more than 29 cents in the U.S.

Labor cost per unit of final output, as distinguished from such alterna-

tive measures as wage rates or hourly earnings, is—on the average—the smallest of the traditional major components of total unit costs. The unit labor costs reported by this study cover only costs for labor directly involved in manufacture. They do not include the cost of the labor which produced the materials purchased by the manufacturer, nor the labor charges incurred in such non-production activities as distribution, selling, or administration. Under this concept of labor cost, the foreign advantage is a distinct one. A little more than 11 cents of the average cost dollar overseas goes for direct labor, compared with almost 18 cents of the American cost dollar.

Responsible for this disparity are the substantial differences in hourly wage rates here and abroad. Although fringe benefits are an increasingly important factor in unit costs both here and abroad, the small international differences in fringes do not play a major role in explaining total unit production cost differences.

Thirty-eight unit cost comparisons from five of the six European Common Market nations—France, Italy, West Germany, Belgium, and Holland—reveal that in better than two-thirds of the cases, production was less expensive than in the U.S. Only the products manufactured in France suggest closely comparable costs.

The forty-six comparisons of British and U.S. manufacturing activities show twenty-eight instances in which the British plant operates at lower cost. In Mexico, manufacturing costs were lower in ten of twenty-two cases, higher in six, and about the same in six. In Argentina, costs were

lower in six out of eight cases. On the other hand, of thirty-two comparisons of Canadian and U.S. costs, sixteen showed higher costs in Canada and nine showed similar costs. Costs were higher in Brazil in nine of thirteen samples, and in Australia a cost disadvantage was shown in six out of nine reports.

The NICB study also provides new light on comparative costs by industry. Thirteen of the twenty-one metal products included in the survey are cheaper to produce overseas, while the remaining eight are evenly divided between higher and similar costs. Eighteen of the thirty-four machinery manufacturers have lower costs abroad than at home, and six have higher

costs. An even division between higher and lower costs abroad occurs among the ten rubber products covered by the study.

Four other major industries report higher costs abroad than in the U.S. Six of the nine paper products included in the survey cost more to produce abroad, as do five of nine products coming under the classification of instruments. Of twenty-five food products, ten cost more to make overseas, eight have similar costs, and seven have lower foreign costs. The chemical products group includes thirty items more costly abroad, eleven with comparable costs, and seventeen that are cheaper to make in foreign countries. ♦



ETHICS IN PUBLIC RELATIONS— WHERE DO WE DRAW THE LINE?

By David Finn

Condensed from Harvard Business Review

THERE ARE NO clear-cut do's and don'ts with which to resolve the basic ethical questions of public relations in industry. Of course, most companies would agree on certain obvious extremes to which they would not resort. But there is a gray area in which one company feels uncomfortable about telling certain kinds of untruths, or making certain kinds of bribes, or engaging in certain kinds of moderately deceitful practices, while another feels entirely justified in doing so.

Probably the most effective way to clarify your own company's ethical threshold—to decide where you will draw the line—is to organize discussions to analyze specific issues confronting the company. The broad issues will become clarified in the course of the analysis.

The ethical conflict in public relations for industry appears to break down into six major issues. To illustrate how general principles that seem clear enough in the abstract become subject to dispute in the day-to-day conduct of business, here are six general questions, with actual cases of companies that encountered them—and how they resolved them.

1. *To what extent should a company present an invented picture of*

its business or product, whether it is accurate or not?

Company A decided to build an image of one of its major products as being purer than its competitors'. This was actually so. However, advertising claims of purity had been used and abused so heavily in the past by other companies that it invented a complicated scheme involving the development of an "independent" research report to provide the basis for newspaper and magazine articles. But this research was engineered; in fact, it was not even to be paid for unless the publicity appeared in print. To insure the success of the project, the man who arranged all this had some editors on his payroll as consultants for the research, thus almost guaranteeing eventual publication. The question was: Is this a responsible method of communicating the image of purity to the public?

The temptation to endorse the plan was very strong, since there was very little doubt that it would accomplish legitimate public relations objectives. And yet, after a great deal of analysis, the risk of possible exposure of the whole scheme emerged as the most important consideration of all. If this happened,

Harvard Business Review (January-February, 1959). © 1959 by the President and Fellows of Harvard College.

then the whole claim of purity, which was really based on fact, would be suspect.

This conclusion was based upon practical considerations (that is, to avoid the risk of exposure), rather than upon ethical considerations. It was pointed out, however, that Immanuel Kant and other philosophers have argued that one should not concern himself too much about why one makes these decisions, for the pragmatic and categorical imperatives often become the same in the long run. Many of our ethical standards today, for example, originated with some very practical decisions made centuries ago.

2. *To what extent should a company build its growth on deserved recognition and earned prestige, and eschew the fanfare of artificially stimulated applause?*

Company B was seeking special recognition for a new variation of a standard product. To highlight the innovation, a new package had been created. The design was particularly striking, and the suggestion was made that somehow a design award should be arranged. Publicizing this award would help impress both salesmen and customers with the company's concern for high quality and, by association, would bring recognition to the new product's features.

In support of the project was the fact that the design was of high quality and could in all probability command a citation from some authority. The latter would not be asked to give the award unless he really felt the design deserved it, so there was nothing forced about it. Against the project was the closeness

which this approach came to fixing judges, whether it was for design awards or anything else.

It appeared to Company B that making the effort to gain recognition was not wrong. But they abandoned the project because they felt uncomfortable about doing something that could be construed as soliciting a biased judgment—attempting to gain recognition where none was deserved.

3. *To what extent should a company obtain the support of editors, government officials, and other public representatives through specialists who sell their influence?*

Company C was extremely anxious to gain attention at an annual trade show. Competition for publicity in the local newspaper was fierce, with every manufacturer at the trade show vying for it, but a public relations representative of Company C knew a photographer on the newspaper and spoke to him about the problem. The photographer developed an idea for a specially contrived photograph that might succeed in getting the company mentioned in the newspaper. He said he would set up and take the photograph for a small fee, with the understanding that if the picture were published in the paper, he would get considerably more money.

The question was: Should the company exploit this special "in" with the newspaper photographer to help solve an important problem?

The conclusion that Company C reached was that the executive would feel a certain amount of pressure not to disclose the details of his arrangement with the photographer. If the details were made public, he would

feel embarrassed, and the disclosure might actually harm the company and its participation in the trade show. Therefore, it would be wisest not to go ahead with the project.

4. *To what extent should business respect the basic principles of the democratic process and the right of the public to make up its own mind, rather than attempt to engineer consent through whatever techniques seem to work?*

Campaign D centered around an amendment to a state constitution. Some business interests were directly involved with the campaign. In similar battles in other states, opposing interests on the other side had used "dirty tactics" and won victories, although the public never really understood what the issues were. The question was: Should "our side" attempt to conduct as clean a campaign as possible and stand a chance to lose the election? Or should it pull out all the stops, as undoubtedly the "other side" would?

Discussion revolved on exactly what was meant by the words "dirty campaign." One problem was how far to go in the use of slogans and other emotional appeals. Was it valid, for instance, to campaign by pointing out who was supporting the other side? A scholarly consultant quoted Spinoza to support the proposition that one cannot persuade by reason alone; he also pointed out that arguing by imputation is legitimate, though it should not be a substitute for campaigning on the issues themselves. He felt that both should be used.

It was agreed, however, that the line should be drawn at anything that might be considered a smear. This

could backfire and lose the election; it could also destroy people. The smear emerged as the prototype of the kind of technique which marked a program of persuasion as "dirty" or "unethical."

5. *To what extent does a company have a responsibility to tell the truth to the public—about prices, labor policies, and so forth—and to what extent can it afford to dissimulate?*

Company E sold its high-quality product to a few scattered discount houses, but claimed it did not sell to any. This was common enough policy. If the truth were told, the company's regular customers would be very angry. And yet the few discount houses it did sell to brought a great deal of business. The question was: Was dissimulation a justified business practice?

One participant in the discussion suggested as a "piece of litmus paper" never to do anything you would not want to see published in tomorrow morning's newspaper. If key customers discovered the lie, they would seriously consider boycotting the product. Moreover, it would hurt the company's credibility in other matters and therefore ultimately damage its entire reputation.

6. *To what extent should business do good because it is its own reward, rather than doing good for publicity purposes?*

Company F had developed an ambitious R & D department. Many of the projects undertaken by this department were of a pioneering nature. Management was anxious to capitalize on this work, and repeatedly directed public relations activity to call atten-

tion to it. Members of the research department, however, were unenthusiastic. They wanted to feel free from publicity considerations in planning their program. The question was: Should research be guided by the idea of what has the best chance of winning public recognition or by the idea of solving the most significant problem?

In the discussion, it became clear that any research projects which might be undertaken with public relations benefits primarily in mind would have a poor chance of long-term success.

There was a fine line to be drawn

between doing research that would win immediate recognition and doing research in the public good. The former might be "gimmicky" and not do the public any good at all, even though it received publicity. The latter would tend to be the kind of research that would do the company the most good, since only if it fulfilled a public need could the company capitalize on it.

The company good and public good seemed to be synonymous when looked at from the long run, and management decided against trying to force a publicity orientation on the research department. ♦

False Notes on the House Organ

WHAT'S WRONG WITH COMPANY PUBLICATIONS? According to surveys conducted by Newcomb and Sammons, consultants in employee communications, six faults turn up constantly:

1. *The publication is too lavishly designed for plant people.* Its quality look and feel tend to repel rather than attract the reader, who is baffled by the modern art and trick layouts.

2. *The publication overemphasizes products and external personnel.* It loses the interest of plant people by making an effort to "sell" employees on the product, stressing its virtues, and introducing pictures of sales personnel and customers.

3. *The free enterprise themes are one-sided.* Management's free enterprise messages are frequently presented without reference to the views of employees. Thus there is no discussion—only preaching.

4. *The publication has no clear editorial plan.* It suffers from hasty, unpremeditated assembly, because of (1) difficulties in securing executive approvals, resulting in last-minute cancellations of material, and (2) failure to have a backlog of approved material to replace such cancellations.

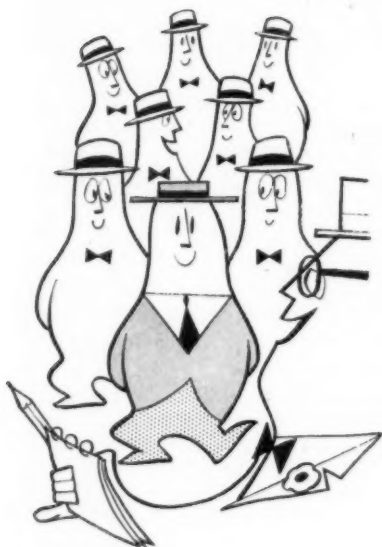
5. *The publication is editorially too "cute."* This one is in the editor's lap; he edits the publication, not for the employee, not for management, but for himself.

6. *The publication is top-heavy with departments.* This is a minor criticism, but it is frequently voiced. When the number of departments is permitted to run wild, surveys show that employees are critical of the lack of meat and potatoes in their publication.

—*The Score*, Vol. XIII, No. 1

*Selecting, soliciting, and
hiring top manpower—
in good times or bad—
requires careful planning. . .*

IS YOUR RECRUITING PROGRAM DOING ITS JOB?



Condensed from Acme Reporter

DESPITE THE OBVIOUS NEED for potential managers, many businessmen would agree with a steel corporation executive who said recently, "We all may still be living a little too much in the past in our relations with college graduates." Consequently, they are paying an increasing amount of attention to the development and

implementation of their recruiting programs.

This makes good sense. Selecting, soliciting, and hiring top manpower—in good times or bad—requires careful and thoughtful planning, and the companies that are doing the best job will reap the richest harvests.

What are some of the important aspects that must be considered in developing an effective recruiting program?

What Are Our Needs? There is no gain in hiring large numbers of young college graduates and letting them go within a few years because there is no place for them. (By the same token, it makes little sense to cut back recruiting in response to immediate economic conditions when

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the long-term future is the real issue.)

An applicant who is looking over a firm will be very concerned about company policy on this matter. One well-known corporation has consistently taken on a host of graduates each year, given them a brief trial, and then terminated all but the best ones. This has become common knowledge on college campuses, and the company's recruiters are now meeting with growing resistance.

More frequently, businesses employ promising graduates with the general idea that they will hold onto them and use them to fill the top spots in the years to come—but they have forgotten the time in between. Their good young executives begin to drift away in a few years as they find that the depth of personnel in middle management spots has choked off their immediate opportunities for advancement.

Many firms have found it wise to break down their manpower needs by the amount and kind of training required. Thus they can tell that they have vacancies for X number of high school students, Y college graduates, and Z men who hold graduate degrees.

Where Should We Recruit? Veteran recruiters believe it is wise to pick out a few institutions and concentrate on them, rather than tap a large number lightly. Such a policy seems sound because of the advantages to be gained from a continuing relationship with a school and its placement office. Furthermore, the approach to prospective employees varies with the institution from which they come; and learning all the ins and outs of a student body and a

particular college is no easy task. Moreover, pre-interview preparation is easier to handle if the personnel department has fewer places to cover.

Setting Up Training Programs. Students who have prepared themselves for specific technical jobs like engineering may be anxious to get on to the job. But most young people are not in this category, and may judge a company by its training program. Is it mostly "make work" and a few "canned" lectures, or is it really serious business with a concrete purpose in mind?

A great many graduates are looking for a company-wide program that covers different departments or different kinds of work. This is particularly true of those college graduates whose basic background consists of liberal arts or general business courses. Uncertain where their interests and talents lie, they are basically unacquainted with the workings of an industrial corporation. They see themselves committed to one function—as perhaps they are—if they are forced into a detailed orientation in accounting or production or sales.

Choosing the Recruiter. Obviously, the recruiter should know the company well—especially the departments for which he is recruiting. Prospective employees are quick to spot a man who does not know his business.

The recruiter should be able to show an interest in the applicants as people, not just as potential members of his firm. One of the most successful recruiters in the country has been very careful about this point; whenever he sees a man who is clearly not

suited for his particular needs, he shifts the conversation from the opportunities in his company to a discussion of the young man and his interests and potentialities. Needless to say, this is greatly appreciated by placement officers—so much so, in fact, that they are more than likely to mention his name to good men who come in asking "Whom should I talk to?"

In short, the kind of person the recruiter is seems to be far more important than his rank in the company or his other duties. "The dominant requisite," says one placement officer, "is that he be a man who wins the respect of the students through his contacts with them."

Knowing the Placement Office and the Institution. Just as different schools have different characteristics, so placement offices operate according to different ground rules and have different objectives. Some are set up primarily as employment offices referring specific men to openings for which they seem suited and seeking out qualified candidates in response to the requests of companies. Others see themselves as service agencies to both student and corporation, providing the machinery whereby they can become acquainted with one another.

Successful companies have found it equally important to know and understand the institution itself, so they have clearly in mind the differences between it and other institutions, and, in the case of a university, between the kinds of training offered at the various levels, the contents of the several programs, and so on.

Prepare Good Literature. Low-

pressure selling, factual information about the company and its prospects, and detailed material on training programs and future opportunities seem to be the most appealing characteristics of good recruiting literature. But it is dangerous to generalize; it is essential to think in terms of the individuals themselves. Students with different training and levels of education will not react alike, and many companies have found it worthwhile to develop separate literature aimed directly at the several talent reservoirs they are seeking to tap.

Establishing Salaries. Starting salary is by no means the determining element in the choice most young people make. They expect to receive a pay check within a generally equivalent range in any company, but they are much more interested in the firm itself and the opportunities it offers for the future than in a large income the first year.

In general, a company should keep as flexible as possible, at least during the early recruiting period. No recruiter should feel pressed to indicate the exact starting salary available to a particular man, so long as he can and will quote the appropriate base figure for the applicable degree and the basis of computing the additive structure.

Pre-Interview Preparation. Most placement offices have well-used libraries which should be stocked with up-to-date material. Some businesses fail to plan this part of their activities carefully enough, so that students who are prospecting find nothing but three-year-old annual reports on hand when they come in to look around.

A number of successful companies get in touch with the placement officers before the formal interview period even starts. They ask for resumés of men interested in the kinds of jobs they have to offer, and scan grade lists, geographical groupings, and the names of extracurricular leaders. In some cases they seek out the men that look promising, or write them special letters inviting them to come in for an interview.

Summer recruiting programs are becoming more and more popular. Though this approach started out as a plan to reach technically trained students early in their careers, it is now being extended to all kinds of prospective executives. Some firms have even closed down their senior-year recruiting activities, and have concentrated on signing men up for summer work. Such vacation-time programs are carefully planned to introduce the man to the company, and vice versa, thus reducing the risk when a man is finally hired.

The Interview Itself. The businessman should not be surprised if the applicants start interviewing him! This apparently topsy-turvy situation became so pronounced in one institution that the placement director had to assure the company representatives that he was not running any rehearsal sessions; it was simply that the men wanted to know certain facts about the company—and also about living conditions in the area where they would be assigned, schools, arrangements for military leaves, and the amount of traveling required.

And, of course, any candidate interested enough to ask about the company is also anxious to know what

the next step is. Exactly when is he likely to hear from the company? What about visits to headquarters? Should he make any further moves, or wait until he is approached again? A clearcut statement about such details leaves a good impression.

The Follow-Up. If a prospective employee is invited to visit the company, he should see as many people as possible. He will want to meet and talk with those who will be his associates and superiors if he is hired. In the case of married men, some organizations have made it a practice to show wives around and help them get oriented.

Prompt and well-worded letters either making an offer or turning a student down are good public relations devices. At the same time, it is a good idea to let the placement office know the final outcome. They will appreciate the courtesy—and it will help the next time their services are needed.

A number of companies keep files on men they wanted but failed to hire. By keeping track of their whereabouts, they have been able to make them subsequent offers, and thus have picked them up on the second go-round.

The competition for able graduates continues to be keen, and the kind of program outlined above may soon prove to be only the barest minimum for companies whose needs are continuous and sizable. A campaign that is carefully tailored to the interests and aspirations of today's young people—and these goals do not include merely more money—is the key to maintaining the needed flow of talent into U.S. industry. ♦

A correctly developed budget can be a vital aid in planning a balanced research program . . .

How Industry Uses R&D Budgets

By James Brian Quinn

Condensed from N.A.A. Bulletin

HOW USEFUL are R&D budgets? The answer depends to a large extent on what they are used for, according to this author's survey of 60 top research, financial, and operating executives in a number of the nation's largest chemical, pharmaceutical, and electrical concerns. The consensus of these men is that budgets are vital in planning a balanced R&D program but are of questionable value in the control of research costs and the measurement and evaluation of research output.

Opinion was almost unanimous that of all devices for the planning of R&D programs, the budget presented the most complete and easily visualized picture of the projected program. Properly prepared, the budget helps in (1) achieving a balanced research and development program, (2) coordinating the program with the other plans of the company, and (3) checking certain nonfinancial aspects of research planning.

In the planning of a research program for the forthcoming period, the budget can help insure a proper balance of effort. It forces management to think in advance about its planned expenditures, both in total amounts and in each sphere of effort.

Research planners must make sure that the basic research and development phases of their programs are extensive enough to provide new knowledge for future development and applied programs. At the same time, the short-range research and development programs must be sufficient to meet the company's current and near-future technological needs. It is also important that each product line receive enough of the kind of technological support it needs. The budget can indicate whether all these requirements have been provided for equitably.

A correctly developed budget also helps in coordinating the proposed research program with the other operating and financial plans of the company. It provides an over-all picture of the proposed research program understandable to nontechnical operating managers.

Meetings to discuss the budget give operating managers an opportunity to review the proposed program, its balance, its costs to their profit units, and its relevance to their activities. They can ask penetrating questions that will force research managers to defend their planned programs. "Pet projects" of individual scientists or operating managers will

come under general scrutiny. The exchange of information at these planning meetings is perhaps the best "control" top management has over its program. Operating executives have an opportunity to make their technical needs known to the research director, and he has a chance to make them aware of his problems and of the value and amount of technology his group is supplying.

To determine the total amount of research money it should currently be spending, and to balance the various segments of its research and development program, one company said that it was experimenting with "growth curve analysis." This firm has made curves of the investments required by successful research projects in the past. These tend to follow the "S" curve pattern: Investments are low in the basic research phase, grow slowly in the development phase, mushroom in the applied and pilot plant stages, and level off after initial market introduction of the product. When a sufficient number of such curves have been developed, the company hopes to have a better basis for balancing its program. By coupling its capital forecasts with this analysis, it hopes to achieve long- and short-run integration of its research and financial plans.

The R&D budget can also be useful as a check on the nonfinancial aspects of research planning. Individual or group work-loads may be reassessed if it becomes apparent that a particular research unit has had too many projects scheduled for it. (In one case, 240 per cent of a scientist's time was committed piecemeal for a year, before a careful

budget preparation picked up the inconsistency.) The important balance between technical and nontechnical personnel will often show up dramatically in a well-presented budget. Thinking in advance about capital equipment requirements, special expense materials, or necessary facilities frequently helps to avert problems which might have developed if some formal aggregating plan were not used.

The inadequacies of the budget as an R&D cost control device stem from the fact that cost standards cannot be reasonably established for units of research output. Analysis of variances from the budget, as ordinarily practiced in accounting, requires definition of the units to be produced and development of a predetermined cost standard for each unit. But units of knowledge output cannot be defined before the knowledge is obtained, nor can the cost of producing an increment of new knowledge be predicted accurately enough to allow the use of the prediction as a cost standard.

Not a single operating or research manager interviewed found the research budget useful as a standard against which to measure the efficiency or effectiveness of the research program. Nor did any of the research executives interviewed consider his ability to stay within the total R&D budget to be a measure of the efficiency of his operation or of his management capabilities.

By hiring or not hiring people, the research director can control his total expenses very accurately. However, such control could be extremely costly to the concern. The objective of research is to produce enough

technology to support the growth and competitive objectives of the company. In evaluating the research effort, therefore, executives should be more concerned with the rate at which applicable technology is coming out of research than with 2 per cent expenditure variances. The function of cost accounting in research and development control is to warn manage-

ment that it may have to reappraise the current commitment rate. Cost accounting can help executives observe changes in plans and assess the cost of these changes, but budget vs. actual comparisons do not provide sound evaluations of the efficiency or effectiveness of research efforts. These appraisals must be made by other techniques. ♦



"What do I get for my 20 years of loyal service?"

—The Wall Street Journal 1/5/59



Putting a Price Tag on Business Meetings

By Osmond Turner

Condensed from *American Business*

WE HAVE TO DECIDE" said the account executive of a large advertising agency, "which of these seven packages most closely fulfills our policy for this client account." The meeting was scheduled for half an hour. It lasted two hours, and when it was over there was still no decision as to which was the best package. It had not even been discussed. Instead, the meeting had been devoted to discussing whether the policy was adequate and whether it was the best policy.

This is typical of tens of thousands of meetings held in thousands of organizations every day. Why do they go wrong? Because of two or three basic errors—errors that can be easily corrected.

It is time we put democracy in meetings into its proper place and used meetings efficiently to communicate information or to draw information from the people present. We should seek to have a permissive atmosphere, but we should make it clear that in most cases it is the leader or the chairman who will have the burden of control.

Before any meeting is planned, the executive must analyze the problem

and decide whether a meeting is the best way to solve it. Many problems are best solved by sending a memorandum, writing a letter, or by the executive himself coming to a decision. If he really feels he needs a meeting, he should decide what the problem is. Most business meetings have one or more of seven objectives:

1. To help the chairman to make a decision.
2. To give advice to another person or body.
3. To inform the members; for example, to inform a sales force of a new policy.
4. To draw information from the members.
5. To pool information.
6. To come up with new or creative ideas.
7. To reach decisions as a body (really practical).

The executive should next decide who is to be the chairman and why. If the meeting is to communicate information or draw information from others, or if it is just a discussion group, it may well be that the most senior person will not be a suitable chairman. He should not have the burden of control if he has a large

American Business (November, 1958), © 1958 by Dartnell Publications, Inc.

contribution to make. A more junior person who understands the problem and is firm and tactful may be a better choice.

If the meeting must make a decision, then the highest-ranking person must take the chair, because he will make the decision with the help of the other members of the meeting.

The next decision is who should attend the meeting and why. Every person must be there for a specific reason: he should either have a specific contribution to make or have a specific role as observer.

Last of all, the chairman should carefully estimate how long is needed to reach the objectives and how much the meeting is going to cost. One small English firm was horrified to find, after examining the meetings they held during a year, that meetings alone would cost them 35,000 pounds a year (\$98,000), even assuming that the meetings kept to their allotted times. Everyone should be made aware of how costly meetings are; waste should no more be tolerated at meetings than it is on the production line.

One way to do something about wasted time is to allot each executive an annual budget for his meetings. Get the help of the cost accountant, if necessary, and find out the value per hour of time at each executive level. Let each executive who holds meetings know how much he may spend within the year. That expenditure should be controlled, and he should be held accountable if he exceeds his budget. If he does, he should be required to come for a supplemental budget, and he should hold no more meetings until the ad-

ditional appropriation is approved by top management.

There are three stages in preparing to conduct a meeting: (1) thinking around the problem; (2) arranging the material for discussion into a clear order; and (3) outlining on small cards the objectives, limits, and main topics to be discussed.

When you take the chair at a meeting, outline to the members the subjects for discussion and how you propose to deal with them. Make it quite clear how far you are prepared to allow the discussion to go on each subject. If you are discussing how to implement a policy, for example, make it clear that you will not allow the policy itself to be discussed.

Next, set the meeting in motion—not by picking on somebody, but by asking people at the meeting for their comments. Do not be afraid of silence at this stage; people need a little time to digest what you have said, to orient their thinking, and to make up their minds what to say.

During the course of the meeting, watch with an eagle eye for anyone who gets off the track. The moment the meeting begins to drift away from the point being discussed, stop it gently and unobtrusively and sum up all that is relevant that has gone so far. Discard by implication anything that is irrelevant. Get the meeting back on the right topics, and start it going again. Do this as often as is necessary to keep it on the right track.

When all the subjects have been discussed, and when you as chairman have made any decisions that have to be made and announced them to the meeting, sum up the discussion, let

everybody see to what extent they have reached their objectives, and indicate clearly to them what future action is to be taken. Last of all, insure after the meeting that action is taken before the next meeting. Instill into all your meetings a sense of purpose and of urgency. Have in your mind's eye a clock, marked not in hours and minutes, but in dollars.

When you get back to your office, evaluate the success of your conference. Was your structuring adequate? Would you class it as excellent, good, or fair? Could you improve it? Were you impartial, or did you dominate the meeting? Did you keep yourself

and the meeting on the subject? Did you sum up when the meeting drifted? Did you sum up at the end, and indicate what action was to be taken? If you cannot be objective about all these questions, ask other people. Get a picture of what kind of a meeting leader you really are. Finally, work out how much your meeting cost. Did you exceed your budget, or did you save on your estimate in that meeting?

Meetings can be a fine tool of management if they are handled properly. They are costly and frustrating if you do not keep your eye on the dollar clock. ♦

The Pen Is Mightier than the Typewriter

THERE ARE MANY OCCASIONS in business when handwritten communications can be quicker, more convenient, more economical, or more personal than typing. In her book, *Improve Your Handwriting*, Claire Trieb Slote suggests some of the uses for which handwritten messages may be more appropriate and efficient:

Sometimes penning a message or memo is more convenient than having it typed. Short notes or brief instructions can be written while still fresh in mind. Some on-the-go executives carry memo pads with carbons; with no extra effort, they have a record of their handwritten transactions.

Handwriting is often more economical. A typed memo can cost \$1.25 or more and takes the time of two people. An executive can often save time and money by jotting an answer right on an incoming memo and returning it to the sender.

And of course, handwriting is more personal. A note of congratulations or condolence, for example, is likely to be more appreciated if it is handwritten, rather than typed.

The sales department is a particularly fertile field for effecting savings through the use of handwriting. For routine reporting, a simple check-off on printed forms often suffices. Then the salesman can write important information for direct transmission to his superior without the time and expense of a typist. He, too, can use carbons for a record.

A study of ways to cut paperwork costs, conducted by the Research Institute of America, concluded that many temporary work reports, work sheets, or first drafts don't have to be typed, as long as they're legible.

—*Management Methods* 10/58

In the light of current business developments, some cherished assumptions about management may have to be re-examined . . .

A fresh look at some Management Principles

By Richard C. Anderson

*Condensed from
Business Horizons*

PRESENT PRACTICES of organization and management philosophy rest on a set of concepts or principles that seem rational and that experience has verified in some measure. But recent business developments indicate that a fresh look at some of them may be in order.

Decentralization. Decentralization is merely a device of management, not a symbol of untarnished virtue. We are attracted to it by nostalgia for those golden days of yesteryear

when "every man was his own boss," and we seek to recapture what we believe was the creativity of the small proprietorship. But when we try to recreate these conditions, we encounter two serious obstacles. First, as long as a unit remains part of a larger organization, these conditions cannot be duplicated precisely. The central organization must exercise some control, and it thus restricts the subordinate unit's autonomy. Second, we have exaggerated the motivation and drive of the individual entrepreneur. Even if this motivation were as intense as we have idealized it, it did not apply to a large number of people. The vast majority of people have always been employed by someone else, and the problem of motivating people was as critical then as now.

It is sometimes contended that decentralization stimulates greater effort by holding one "accountable for results." There is much truth in this, but such effort results more from a soundly conceived alignment of responsibilities than from decentralization alone. The purposes of business are not served by engendering a spirit of separateness—which too often results from decentralization. Size alone is a divider, and the need for cohesiveness is perhaps all the more compelling where decentralization is most likely to occur—that is, in the large organization. Thus, while decentralization may be absolutely necessary in large concerns, coordinated control is equally essential.

The guiding principle in organizations should be the adequate assign-

*Business Horizons (Winter, 1958), © 1958 by The Foundation
for Economic and Business Studies, Indiana University*

ment of responsibility, not dogma on centralization or decentralization. The criterion should always be: Where is authority needed in order to carry out the activity? For some activities, authority must rest at the top; for others, at the bottom. Which should be where, and in what degree, can be decided only by the facts of each case.

Line and Staff. An organization should be a group of collateral activities, each sharing in the total endeavor and each having both authority and responsibility for accomplishment within its own sphere. The well-balanced organization does not require that "second-class citizens" wait upon others to breathe life into their existence.

Management, in dividing activities, says to each unit: "You are to become a specialist in your assigned responsibilities and to perform these responsibilities for the maximum benefit of the total enterprise. You will be accountable for results in your own sphere. You will coordinate your efforts with others in the organization who are also specialists in their spheres. If you use their services and they fail in their responsibility, they will be accountable. If you do not use their services, you will be accountable for failure, not only in your own sphere, but in any other spheres that are affected."

When the purpose of specialized activities is explained in this manner, many problems of interdepartmental relationships disappear. The concept of collateral responsibility does not destroy anyone's rightful authority nor prevent holding anyone responsible for accomplishment. It merely

assures that responsibility for accomplishment rests with the individual best qualified to accept it—namely, the one who specializes in it. Shortcomings can be traced to the unit responsible, regardless of where they appear.

Each segment of the enterprise has two types of responsibilities: First, it executes programs, and second, it supports others in the execution of theirs. Interdependence—not separation—is the key. The value of each unit should be measured by its contribution to the whole, not by performance of its own activity alone.

It is time to abandon the "line" and "staff" labels as organizational distinctions and replace them with the concept that each unit has elements of execution and service, and that each has a collateral responsibility to further the best interests of the total organization.

Manager or Specialist? Management is a separate and distinct activity much like engineering, medicine, or salesmanship. When a person becomes a manager he is faced with problems different from any he encountered as a nonmanager. The particular responsibilities which distinguish the management job from others have made of management a specialized line of endeavor.

The line of promotion for most positions is a supervisory job, and if an employee wishes to improve himself, he usually must leave his own specialty and attempt to become a specialist in management. This frustrates a large number of employees, since by mathematical odds they can never become managers. It also weakens the quality of super-

vision. Managers should be selected for demonstrated managerial ability or aptitude, not for achievement in another specialty.

Management skills are vital, but an organization does not live by management alone. Some management positions may contribute more than other positions; and if so, this should be fully recognized. But some subordinate positions may be of greater value than the position supervising them. The nonmanagement specialist should not be penalized for remaining with his specialty. Each specialist should be rewarded in income and status according to his contribution to the enterprise, and he should be encouraged to remain in his own specialty if he so desires.

The other side of this coin is that we have concentrated on developing other specialties and neglected the specialization of management. We are giving increased attention to management development, but most development programs consist of rotational assignments among other specialties. Development programs should concentrate on acquiring management skills and arranging rotations for varieties of *management*, not just for varieties of *activity*.

To develop successful managers, we must do two things: (1) broaden the opportunity within all specialties; and (2) develop greater competence in the management specialty. We must also abandon the notion that only the men at the top of the organization ladder are "successful." The successful individual is the one who receives satisfaction from his work and contributes the fullest measure of himself.

Status and Privilege. There are two ways to confer status to a position. The first is by organizational location, where status is conferred by position in an organization structure; certain important duties are assigned to it, or certain titles are conferred upon it.

The second way to confer status involves conditions of work. For one position, a private office is provided; for another, an automobile; and so on. These conditions of work become symbols of status and, in the sense that they are rights enjoyed by one individual, they might be called privileges.

There can be no objection to the granting of privileges—even to the special arrangements for compensation brought about by existing tax laws or to the plush environment deemed desirable for outward appearances in some positions—when they serve a purpose; that is, when they are functional. But status bestowed by nonfunctional privileges encourages aspiration to positions with an undue emphasis upon these privileges.

The basic questions are these: What privileges serve the organization's purposes? What does the job require? For example, a salesman needs a company car, an employment interviewer needs a private office, and the president of the company, who should be free from concern with routines, may need a chauffeur. Many privileges may be conferred simply to relieve nervous strain. Such privileges are basically tools of the job, like a carpenter's hammer is a tool of his job. They help achieve the organization's objectives. But privileges that contribute nothing to per-

formance have no place in the business organization.

Communications. The increasing size and complexity of business have complicated communication, but poor communication results more frequently from a misconception of the management process than from organization size alone. Efforts to resolve the inadequacies of communication through "programs" or "techniques" without an attempt to correct the underlying conditions are doomed to failure.

Good communication is a result of sound management, not a cause of it.

It requires a management atmosphere in which the individual is respected for what he is and in which he is encouraged—indeed, expected—to contribute his maximum capacity. Face-to-face contact itself does not guarantee good communication. There must also be a mutual acceptance, a willingness to receive as well as transmit, and a recognition of the sender's and the receiver's circumstances. In the proper atmosphere, free exchange flows as naturally as breathing; without this atmosphere, communication "programs" are futile. ♦

Health Insurance—Healthier than Ever

HEALTH INSURANCE in the United States expanded on many levels in 1958 to continue the steady growth it has maintained for the last 20 years, according to a report from the Health Insurance Institute. A new record was reached when an estimated \$4.8 billion in health care benefits were paid by all insuring organizations during 1958, surpassing the 1957 benefit payment figure of \$4.2 billion by more than 14 per cent.

At the same time, the number of Americans protected against the cost of hospital and doctor bills through insurance company programs, Blue Cross-Blue Shield, and other health care plans was estimated at 121 million at the end of 1958. Some 70 per cent of the nation's population now have health insurance.

Benefit payments by insurance companies alone continued an uninterrupted upward trend, exceeding \$2 billion during the first nine months of 1958—an increase of better than 10 per cent over the same period in 1957. It was estimated that the total amount of benefits paid by insurance companies through the end of 1958 rose to an unprecedented \$2.6 billion, a rate of more than \$7 million a day for the entire year.

Reports from the 700 insurance companies handling health insurance showed that the number of persons covered for major medical expenses climbed from 13.3 million to 16.5 million, an increase of nearly 25 per cent. Another increase was shown in regular medical expense insurance, where the number of persons covered grew by an estimated half-million over the 1957 figure of 33.2 million. The number of persons covered for surgical expenses remained constant at 67.5 million.

The Premium on Premiums

IT HAS BEEN ESTIMATED that 60 per cent of American families save trading stamps, proving the existence of a consumer environment extremely partial to, and shoppers on the lookout for, all sorts of promotional opportunities. Aggressive merchandising has been the trademark of American business since the turn of the century, and it gives every promise of extending the war of stamp books, box tops, cash-discount coupons, mark-downs, deals, and premiums much longer than the Wars of the Roses.

Premium offers are a merchandising tool in use more than ever. The field of banking, supposedly conservative, draws in capital by offering clocks, wallets, luggage, etc. to new savers. Others use premiums to get consumers to pay bills on time, to get better distribution, more distributor cooperation, more work and effort out of personnel. However, the main purpose is increased consumption of the product. To wholesalers, the premium is a two-edged sword. If it requires too much handling, book-keeping, and storage, it cuts into profits; if it increases product consumption without excessive costs, it is a boon.

The premium industry is a \$2 billion business that, like advertising, is out there selling. Advertising of \$10 billion was necessary last year to move the goods produced in the U.S. Premium offering was more important than all advertising media other than newspapers, which last year carried advertising totaling \$3.2 billion—*only a third more than that spent on premiums*. Advertising on radio, in magazines, and on TV did not play as important a role in merchandising as did premiums. And the business may grow: In 1958, the premium industry ran 15-20 per cent over 1957, and the next ten years may well show a step-up of 100 per cent to \$4 billion.

Of course, certain difficulties are inherent in premium offers. It is questionable, for instance, whether offering merchandise via premiums is an efficient way of distribution. As far as some manufacturers are concerned, it is; they move sizable amounts of goods at relatively little cost. But the manufacturers of national products, using traditional methods, are beset with a sales problem that premiums seem to aggravate.

When a premium is used, sales and production of goods usually increase, but as soon as it's dropped, sales drop. Emphasis may switch to another line, product, or brand that the distributor may not carry.

Ironically, the greater the concentration of the use of premiums in a class of products, the less is consumer loyalty to a particular brand. Since the consumer has been trained to disregard brand names and run after premiums, more and more the brand-name shopping habit is eroded. The consequences are obvious: When a manufacturer uses premiums, his competitors either have to follow suit or change their pricing; but as soon as that is done, the manufacturer who made the initial premium move has either to resume the give-away strategy or revamp his pricing, too.

—The Biddle Survey 9/30/58.

ALSO RECOMMENDED

BRIEF SUMMARIES

of other timely articles

GENERAL

MANAGEMENT'S JOB IN 1959. *Dun's Review and Modern Industry.* (99 Church Street, New York 8, N.Y.), December, 1958. 75 cents. Recession-toughened management will fight hard in 1959, according to this nationwide survey of manufacturers, distributors, and bankers, which reports on problems to be expected in the new year and business's strategy for strengthening profits in the face of rising costs and stiffening competition. The survey is broken down into five parts: (1) prospects and problems of '59 (according to company presidents), (2) key industrialists' views of the year ahead, (3) the coming year in marketing, (4) the labor outlook, and (5) what to expect from Washington.

BREAKING INTO A \$500-BILLION ECONOMY. *Business Week.* (330 West 42 Street, New York 36, N.Y.), December 27, 1958. 50 cents. Predicting that the U.S. economy will pass the half-trillion-dollar level by the end of 1959, the editors of *Business Week* analyze here some present economic problems that will become even more serious with growth—principally, inflation, the balance of power between labor and management, and the need for greater industrial adaptability to meet the stresses of change. Also presents some interesting predictions for the year ahead about consumer behavior, new products, new management methods, and the impact of certain political and social pressures on American business.

THE AMERICAN ECONOMY: 1959. *Saturday Review* (25 West 45 Street, New York 36, N.Y.), January 17, 1959. 25 cents. Prepared in cooperation with the Committee for Economic Development, this special issue brings together articles by distinguished industrialists, scholars, and spokesmen for labor and government. Examines such aspects of its panoramic subject as: individual freedom in a changing society; internal problems of the domestic economy; foreign economic policy; government and the individual citizen; international aid. A thought-provoking survey.

LOOKING AHEAD 30 YEARS: LEADING BUSINESSMEN FORECAST FOR 1987. *Printers' Ink* (635 Madison Avenue, New York 22, N.Y.) December 12, 1958. 25 cents. In Des Moines in 1987 a time capsule will be opened. Among its contents will be the predictions that appear in this article—forecasts by some of the country's leading executives. Among them, that: autos will run on solar energy cells instead of gasoline; housewives will shop from an armchair at home via TV; suburbs will swell as their '58 population triples; pushbuttons will produce full-course meals in five minutes; auto production will climb to 15 million annually; and, presumably, businessmen will still have a sense of humor—like the one who predicted that the New York Yankees would beat the Venus Avengers in the Universe Series of 1987, and that Jack Benny would still be 39.

INDUSTRIAL RELATIONS

ORGANIZED LABOR IN THE DECADE AHEAD. *Business Horizons.* Indiana University School of Business, Bloomington, Indiana. Winter, 1958-59. \$2.00. A round-table discussion and analysis of future trends and probable developments in industrial relations over the next ten years. The participants include: James B. Carey, David J. McDonald, Ewan Clague, and Howard M. Dirks. Among the issues discussed: The prospects for further unionization in the South and among white-collar workers; corrupt practices on the part of labor unions and management; the pros and cons of amending existing labor laws; and collective bargaining issues.

GET FULL VALUE FROM EXECUTIVE TRAINING. *Nation's Business* (1615 H Street N.W., Washington 6, D.C.), December, 1958. Reprints, 15 cents. A reappraisal of management development techniques and of the reasons why the results are sometimes disappointing. The five major pitfalls singled out for discussion here are: failure to relate executive development to job performance and company need; pushing managers too far too fast; using development programs as a substitute for analytical thinking; expecting too much from the program; and tying management development too closely to advancement and promotion.

OFFICE

RENTAL V. PURCHASE. By W. E. Charlton. *Machine Accounting and Data Processing* (956 Maccabees Building, Detroit 2, Mich.), November-December, 1958. \$1.25. Factors influencing a decision to rent or buy data-processing equipment are spelled out in this article, which examines the pros and cons in terms of obsolescence, taxes, depreciation, interest loss, anticipated usage, maintenance, and savings. In addition, the author presents a clear-cut method, with accompanying formulas, for calculating rental and purchase costs.

OFFICE MANAGEMENT YEARBOOK ISSUE. (212 Fifth Avenue, New York 10, N.Y.), January, 1959. \$1.00. In analyzing the changes in concept and practice that have occurred in office management, this special yearbook issue presents some problems and solutions involved in achieving automation in the office, examines changes in the basic groups from which clerical workers will be drawn, appraises new techniques in setting up a good systems design for the office, outlines new developments in office layout and furnishings, and provides a review of office equipment.

PRODUCTION

BETTER MAKE-OR-BUY DECISIONS. By E. B. Cochran. *Factory Management and Maintenance* (330 West 42 Street, New York 36, N.Y.), December, 1958. Reprints 35 cents. In addition to a worksheet for make-buy decisions and a table showing how a multiproduct line will affect such decisions, this article presents a breakdown of factors such

as measuring costs, reviewing facts, weighing options, and figuring payoff timing, all of which are necessary for laying the groundwork in analyzing make-buy alternatives. It further cites four typical make-buy problems and points out how a reversal or modification of the ordinary solution can sometimes save money for a company.

SPECIAL FERROUS ALLOYS. *The Iron Age* (Chestnut & 56 Streets, Philadelphia 39, Pa.), October 16, 1958. Reprints gratis. Special alloys are as indispensable as major structural irons and steels, according to this feature report which classifies eight of these ferrous alloys according to the industrial jobs they are intended to handle and includes tables illustrating their special properties and typical uses. Among the

alloys described are some that are heat-resistant to such an extent that they can withstand temperatures up to 2000° F.; others that resist corrosion and chemical contamination and are thereby vital to chemical food processing and petroleum industries; and still others that resist abrasive wear, provide springs with strength and elasticity, act as permanent magnets, or serve as core materials for transformers and motors.

RESEARCH AND DEVELOPMENT

PROBLEMS OF R & D MANAGEMENT.

By C. Wilson Randle. *Harvard Business Review* (Soldiers Field, Boston 63, Mass.), January-February, 1959. Reprints \$1.00. This report of a survey conducted by Booz, Allen and Hamilton, which covers the research and development activity of over 100 companies and the views of 3,500 individual scientists and engineers in 23 selected laboratories, examines R & D problems as seen by personnel at three levels: (1) chief executives, (2) research directors, and (3) scientists and engineers. Indicating that management does not manage as well as it knows how in the research and development area, the survey pinpoints specific problems, trends, and influences in today's R & D management.

REINFORCED PLASTICS.

By Gregory Dunne, Arthur Gregor, and Douglas G. Meldrum. *Industrial Design* (18 East 50 Street, New York 22, N.Y.), October, 1958. \$1.50. An objective appraisal of the products, the processes, and the people responsible for the present status and future direction of the comparatively new industry of reinforced plastics. This material, which has had a wide variety of applications, is essentially a combination of polyester resin and fibrous glass, according to this article, which traces the development of the industry from 1941 through 1958, lists discoveries of new combining materials and processes, and outlines the resultant new products along with the companies that introduced them.

MARKETING

THE RICH COME OUT OF HIDING.

Business Week (99 North Broadway, Albany 1, New York), November 15, 1958. 50 cents. Being rich has lost its stigma, according to this article, which reports not only that wealthy people are converting sizable amounts of money into goods whose value is likely to endure, such as fine art, antiques, and gems, but also that they are footing bills for more lavish entertainment. The article puts forth reasons for the new trend in big spending, reports the increase of taxpayers in the large-income brackets, reviews regional differences in attitude toward the newly rich, and

points out the most popular investments in different parts of the country.

HOW TO USE MARKET-SHARE MEASUREMENT.

By Alfred R. Oxenfeldt. *Harvard Business Review* (Soldiers Field, Boston 63, Mass.), January-February, 1959. Reprints \$1.00. A particular company's share of a market may shrink for reasons wholly unrelated to managerial failure and expand in the absence of managerial excellence, in the opinion of this author, who examines the validity and effectiveness of using market-share measurement to appraise performance, to express market

targets, and to assist in forecasting sales. The author points out other factors that must be taken into account if management is to get an accurate picture and avoid costly mistakes or lost opportunities.

THE AD DEPARTMENT IN TRANSITION: WHAT WILL ITS FUTURE BE? *Printers' Ink*

(635 Madison Avenue, New York 22, N.Y.), November 7, 1958. 25 cents. The results of a survey of advertising and marketing executives on the future status of the company advertising department. The trends—all of which should be highly encouraging to company advertising executives—are toward increased freedom and autonomy for the advertising department, greater integration with other company activities influencing marketing, a closer relationship with top management, and more voice in policy-making than it has had in the past.

CONVENTION FACILITIES. *Sales Meetings* (1212 Chestnut Street, Philadelphia 7, Pa.), November 21, 1958. 50

cents. This special issue, designed for executives who plan meetings, conventions, exhibits, or expositions, provides a reference to convention hotel and auditorium facilities in North America and nearby islands, as well as sources of services and suppliers for meeting and exhibit needs. The data on hotels and auditoriums includes rates for meeting rooms, bedrooms, meals, and exhibit areas, affording a quick estimate of major meeting costs at the sites that executives might consider. Airlines and railroads that serve each of the more than 800 hotels listed in this facilities guide are shown for each city.

ANNUAL DESIGN REVIEW. *Industrial Design*

(18 East 50 Street, New York 22, N.Y.), December, 1958. \$1.50. This special issue reviews innovations in product and package design that the editors consider the most significant developed in 1958 and those that, in their opinion, will influence future product design. Their nominations for the year's best are tastefully chosen and handsomely illustrated.

FOREIGN OPERATIONS

U.S. INDUSTRY MIGRATES ABROAD TO TAP MARKETS OF THE WORLD. *Business Week*

(330 West 42 Street, New York 36, N.Y.), January 3, 1959. Reprints, 50 cents. U.S. industry has more than doubled its investment in foreign operations since 1950, and investments overseas—plus sales and profits—are expected to climb even more dramatically in the next decade. This special report reviews the types of investment projects that are currently attracting American capital and the ways in which American companies are organizing to take advantage of new opportunities. Also includes: a report on the savings that can be realized by conducting industrial research abroad; two detailed case histories of company expansions overseas; and an analysis of the rising flow of imports into the

United States and its implications for domestic business.

TRENDS TO WATCH IN OVERSEAS COMPETITION. By Alexander O. Stanley. *Dun's Review and Modern Industry*

(99 Church Street, New York 8, N.Y.), December, 1958. 75 cents. Lower prices, limited dollar exchange, more liberal credit terms, exchange and import controls, and higher and restrictive tariffs are causing increasing competition overseas, judging from this new survey of 222 American companies in 31 industry groups. This survey not only examines the factors causing trouble, but also points out where difficulties are being encountered and outlines steps being taken by the companies surveyed to improve their competitive position.

Dress Rehearsal for Decision-Making

(Continued from page 8)

several machines for varying lengths of time; the object is to provide a schedule that will get jobs out when they are due and keep idle time to a minimum.

Alan Rowe and Robert Smith, who developed these games, ask "What's good about the game approach to training?" They provide their own answer: "A lot. It beats conventional lecture and discussion methods in creating understanding of subject matter. Students take part directly in solving problems, thus learn by doing. This kind of learning sticks. Problems simulate the pace and complexity—and the unexpectedness—of real-life plant problems. Students learn to rely on tested formulas instead of intuition. Cost is low."

One company uses its game as part of sales training. A game for systems and procedures specialists was unveiled at the recent International Systems Meeting—it is called "SMART" (for "Systems Managers' Administrative Rating Test") and was billed as a "dynamic test of actual skill in administrating systems." The AMA's Materials Management Simulation will, when used as part of manufacturing seminars, examine such problems as purchasing, production, distribution, and inventory control. Gaming may also be a natural for teaching various financial techniques. The horizon is broad, and not very distant.

One of the most impressive aspects of business games is the extreme involvement of the participants. Students not only don't cut class, they stay after hours—even when the teacher isn't pretty. The executives weigh their decisions and examine their operating statements with surprising intensity, and they frequently continue to discuss the problems of their "businesses" long after the actual play is over.

USING BUSINESS GAMES

How can your company use simulation for training? This depends on your over-all management-development program. A "business game" is an educational aid, similar to, though more effective than, a case history or role playing. It may heighten the value of one of

your present courses, or perhaps form the basis for a new one. But remember that playing the game must only be part of your program, no more to be used without a supporting vehicle than is an outboard motor.

Only a few business games have been described in print, and very few are available for general use. Although still in their infancy, they are maturing rapidly, and some day they will be as easy to obtain as a training film. If you want to develop your own, you'll probably need some technical assistance. The larger companies can use a team approach, utilizing training people, research workers, and data-processing specialists now on their staffs. Several management consultants and consulting firms are equipped to provide this new area of service for companies that cannot tackle the job on their own. Periodically, AMA offers seminars on the use of simulation in training.

Although many games use electronic computers, they are not necessary for simulation. The G.E. games, for example, are easy to administer, require very little paper work, and, as their developers point out, their cost is low. A game recently described in the *Harvard Business Review* is available for \$1, complete with all necessary instructions and forms.

An electronic computer does, of course, offer many advantages. In addition to fast, reliable data-processing, it allows for greater flexibility and for the inclusion of various desirable factors that might not otherwise be possible. It permits greater time compression—the ability to simulate years of business in a few hours. On the other hand, one company has a well-established program in which decisions are made once a week, some of them mailed in by “players” from other locations. The computer has many things to offer other than speed, but it is not essential to all simulation training.

THE FUTURE OF BUSINESS GAMES

Although simulation has proved an excellent technique for management training, it has other uses that may prove equally important as time goes on. Business games provide an exciting new laboratory for the psychologist and social scientist—an opportunity to study executive decision-making under controlled conditions—and thus constitute a powerful new research tool.

But more important is their use as an accurate model of the company itself. As the scope of simulation broadens, more and more consideration is being given to the human factor. Some behavior patterns of the consumer, competitors, or management can, of course, be included in the mathematical model. But the actual participation of executives greatly enhances the validity of results obtained, since the success of a company's policies depends as much on the men who carry them out as on economic relationships.

Together with other types of simulation, business games offer one of the most promising tools yet invented to aid management in the myriad of consequential decisions that determine the growth and success of the company. ♦



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"No Job Is Too Big . . ."

(Continued from page 13)

tion, one fact stands out: Responsibility and authority remains within the company or the corporate structure. This situation changes in the multiorganization, where authority originates from the *mutual agreement* of the cooperating companies, rather than from self-determination. Freedom of action comes not from status, but by consent. It is quite possible for an individual to be ultimately responsible to the personnel of more than one company. This unusual situation can lead to confusion and strained relationships if precautions are not taken to avoid them.

The Place of the Specialist

One temptation to be avoided, for example, is the placement of a specialist from one company in a line relationship with another company's personnel. For example, let us say that of three companies represented in a multiorganization, Company One is best known for its capabilities in the field of propulsion. However, Company Two has on its staff a leading propulsion expert whose achievements are unquestionably superior to those of anyone in Company One. In such a case, it would be wise to shift the area of propulsion responsibility to Company Two, rather than placing this expert in the tenuous position of reporting, in a line relationship, to the management of a different company. Another possibility would be to permit him to serve in a consulting capacity to Company One.

The Question of Final Authority

Although it may not seem so at times, the seat of final authority in a corporation is easily ascertained. In a multiorganization, where conflicting opinions between corporate groups must be resolved outside of the corporate structure, a workable system of decision and implementation is imperative. It would be foolhardy for companies who intend to embark on such a joint venture not to agree *in advance* as to what their own *modus operandi* for the establishment of final authority will be. It is not really important whether they decide to place final authority in the hands of the director of the

project, a committee of project people, a member of top management higher than the director, a committee of top management higher than the director, or even an expert not connected with the multi-organization. What is important is that they decide on their approach in advance.

Line Without Staff

The traditional organization is composed of one line function—the “bread-and-butter” function for which the company is in business—and several staff functions—assisting or service functions. It is possible, however, for a multiorganization to be an organizational paradox by being composed solely of line functions. There may be staff people (i.e., liaison man, secretary, clerk, etc.), but the usual staff functions, such as maintenance, payroll, and personnel, can be executed by the individual companies. It is also possible, of course, to make the typical staff functions a direct part of the multiorganization.

PERSONAL RELATIONSHIPS

The intricacies of human relations are difficult enough to master under normal corporate circumstances, but when several companies combine their capabilities, the human relations problems increase exponentially.

These problems tend to resemble the typical “day shift–night shift” type, which those experienced in multishift operations will readily recognize. Simply stated, it means that the important production problems, according to the day-shift people, are due to a particular commission or omission on the night shift, and according to night-shift personnel such problems are directly traceable to errors of the day shift.

The multiorganization could be considered a multishift operation that occurs during the same working hours. There is a tendency among the personnel of the cooperating companies to place the blame for a particular set-back on the doorstep of the personnel of one or more of the other companies. It is just as difficult to substantiate such buck-passing in the multiorganization as it is in the multishift operation. And since there is no customer-supplier or contractor-subcontractor relationship—there is no customer who

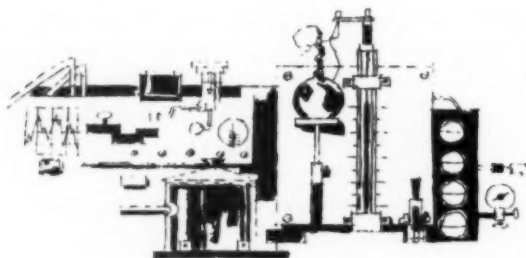
is "always right"—the practice of blameplacing can go to destructive lengths unless the danger is recognized and guarded against.

IMPLICATIONS FOR THE FUTURE

Multiple organizations are now receiving their impetus from huge procurements in the missile field, but there are many commercial activities for which it is equally well suited. Companies considering a joint venture could well find the multiorganization preferable to the conventional methods of merger, consolidation, or incorporation.

An example of a commercial application of a two-company multiorganization might be the formation of a group by a pulp-and-paper manufacturer who does not have sufficient capital to purchase large tracts of lumber and a lumbering-real estate operation that does not wish to divest itself of its land. A commercial three-company multiorganization might be composed of an oil refinery, a chemical company, and a textile mill, where the oil refinery concerns itself with the supply and fractionalization of crude oil products, the chemical company supplies its know-how on fiber derivation from these products, and the textile mill contributes its experience in the weaving, testing, and marketing of these products. In the area of antibiotics, to give another example, animal raisers, slaughterhouses, pharmaceutical concerns, and hospitals could enter into a multiorganization relationship.

It is impossible to imagine all the combination of business endeavors that could lend themselves to this type of corporate teamwork, but it seems probable that the multiorganization will become increasingly important as a method of handling sizable projects—both military and commercial. ♦



Using Value Analysis

(Continued from page 24)

effected through changes in specifications or design. Hence, the analysis is generally confined to the supplier's cost of manufacture, on the assumption that a vendor's prices ought to approximate his costs plus a reasonable profit. Better prices are sought through isolating important cost elements and eliminating unnecessary or inapplicable cost factors and hidden charges.

This type of analysis also involves an understanding of how burden and overhead costs are allocated to individual contracts and items, how standard time allowances make up production costs, and the like. It may also very well involve working with the vendor to reduce his costs through improving his productive efficiency.

Value analysis in this sense is clearly of somewhat limited application, contributing little to the purchase of raw materials, semi-processed materials or off-the-shelf items, or in cases where keen competitive conditions prevail. On the other hand, in the purchase of component parts it may well play a very important role in the determination of a proper value-price relationship.

Product Analysis

The third type of program that is frequently considered to be value analysis is product analysis. In essence, product analysis consists of the investigation of the performance of a purchased part or material with a view to increasing its efficiency. It may consist of recommending changes to a different material or alternative production processes, simplifying the design of assembled components, or shifting from special to standard items of supply. The objective is not primarily to lower the prices paid for the purchased material—although this often results—but to relate designs and processes of the buyer to the production resources of suppliers. For example, one manufacturer used a tiny gear that was formerly machined from pinion stock. Turning, drilling, cut-off milling, and wire bushing resulted in a total cost of 74 cents for each gear. By making the part as a brass sintering, pressed into final shape and size in one operation with the addition of flats on the pinion head, the total cost was cut to 5.8 cents per gear.

One strong advocate of this type of program—and a very successful one—contends that at least three major advantages result: (1) It emphasizes design changes rather than price reductions in negotiations with suppliers; (2) it attacks the technical problem of product performance so as to grasp the opportunity of using completely different materials that would meet the underlying requirements; and (3) it makes considerable use of specialty suppliers who could quote lower prices by employing their own machine tools or production techniques.

The crux of any value-analysis effort is not to be found in a general awareness that this value concept is important, but rather in a definite planned program, emphasizing particular aspects of value, with proper supervision and direction. It would be foolish to attempt to recommend one or another of the three types of programs as preferable under all sets of circumstances. Value programs involve details of design, production, and supply requiring close collaboration between personnel of various departments of a company—and they pay off only when they are carefully tailored to the needs of the individual firm. Any major value analysis effort requires the attention of senior executives to launch and supervise the program, because of the need of establishing the proper emphasis between quality and cost in the light of the product policy of the company, selecting the most important problems for study, and insuring that the necessary cooperation does not interfere with the line responsibilities of the operating personnel.

ORGANIZATION OF THE PROGRAM

How are value analysis programs to be organized? Who is to supervise? What are to be the relative responsibilities of the various departments? Within the purchasing department itself, what is to be the relationship between the buyers and those directly responsible for a value analysis activity? These knotty questions can no more be answered in broad generalities than can the definition of any specific program be universally applied, yet there are some underlying considerations that should be kept in mind.

In attacking the problems of purchasing department organization and personnel, we need not consider the first of the three types of value-analysis projects—namely, the long-range studies of price

trends, economic resources, and supply-demand relationships. This is an extremely valuable activity, to be expanded or contracted as the vision and budget of the purchasing executive permits. But it is purely advisory, and it is largely an interdepartmental matter involving little contact with other departments.

For practical purposes, we may also disregard off-the-shelf purchases. In terms of the number of items bought these will, for most manufacturers, represent the great majority of all purchases; in terms of value or of difficulty of purchase, however, they will account for but a minor percentage of the total. We may, therefore, center our attention on the other forms of value analysis: price and product analysis.

PLACING THE RESPONSIBILITY

Until very recently, purchasing officers in the United States have been prone to assume that value analysis of these two types is a peculiar responsibility of the purchasing department. Though recognizing that coordination among the departments is essential, and though rarely if ever challenging the primary responsibility of engineering for final decisions as to design and of manufacturing for actual production, they have assumed that it is the purchasing department that should assume prime responsibility for the development and guidance of any value-analysis program that may be initiated.

When the case is argued, four reasons are usually offered in defense of this position: (1) Purchasing is, by its nature, the most cost-conscious of all the departments, and therefore most alert to challenge waste. (2) Purchasing is experienced in the type of cost analysis basic to good value analysis through long experience in negotiation and buying. (3) Purchasing is the company's window on the outside world—it has the widest contact with vendors and the best knowledge of what they have and what they can do to lower costs. (4) Purchasing is in the strategic position of being a clearing house for all requisitions. Knowing the over-all requirements of the company, it can take an objective view on cost reduction and serve the company's interests with the least prejudice.

Space does not permit a detailed examination of these arguments, but it is extremely doubtful that they possess the validity commonly

attributed to them. Thus, it is by no means certain that the average purchasing officer is, in fact, qualified either by training or experience to make the detailed type of cost analysis required in a difficult situation. Again, it is quite a dubious conclusion to say that, because he receives dozens of requisitions from all over the plant day after day, the purchasing officer is in a particularly favorable position either to judge long-range requirements or to make a helpful product analysis of these future requirements.

Naturally, without taking full advantage of the purchasing officer's training, interests, and opportunities, no value analysis program will prove much of a success. Yet it is equally true that purchasing is but one of a number of vitally interested departments, and it cannot possibly have the perspective on policy-making and over-all administration of the top management of the company.

If, then, specific value-analysis programs are definitely worthwhile, and if the primary direction for such a program does not properly belong in the purchasing department, where should it be placed? Various possibilities offer themselves.

In Other Departments

Primary responsibility might be placed in some department of the company other than purchasing, such as engineering or quality control. But since sales, engineering, production, and purchasing are all involved in value analysis, it would prove difficult to justify assigning the responsibility to any one department.

In a Special Committee

A simple means of achieving a balanced consideration of value questions without interfering with the existing organization would be through the use of a properly constituted committee. In fact, many companies do use this device, and with considerable success. Detailed investigations can be made by qualified personnel in the various departments, after which their representatives make final decisions in conference. Frequently, several committees are organized to concentrate on particular fields.

Valuable as the use of committees may be, they often suffer from handicaps that make their work relatively ineffectual. The most serious one would seem to be their inability to insure compliance

with their recommendations. In short, they lack the necessary authority. Being largely advisory, they tend to deteriorate into debating societies, with members defending their departmental interests and either unable or unwilling to reach any significant decisions.

In spite of these difficulties, a committee form of organization can accomplish some distinctly tangible results. Indeed, even if no decisions are reached at all, their importance for the exchange of information should not be underestimated.

In a Staff Officer

A third alternative that has merit for many companies is to continue the use of committees but, in addition, to appoint a responsible staff officer reporting directly to the president. His office would be essentially administrative, not consultative, responsible for the preparation of data and for following up to insure that decisions are properly implemented.

It is important to keep in mind that the responsibility of such a staff officer is to coordinate, supervise, monitor, and follow up. His is *not* the responsibility of making the actual decisions, which should always remain in the hands of the technical procurement personnel. In no other way can this staff officer avoid the charge of "riding roughshod" over those primarily responsible for policy and operations. If this charge is avoided, the prestige, the authority, and the over-all direction will be recognized as a matter of company concern, not merely one of departmental interest.

Which of these various alternative methods of administration a company can best use, is, of course, a decision which it can only make for itself. No plan is without its disadvantages; all have some merit. The important thing is that the basic concept of value analysis must be clearly understood, not only by management, but by the firm's personnel as well. Without this understanding, little can be accomplished. With it, much can be done, even in the face of seemingly insurmountable obstacles. ♦

THE ART OF PROGRESS is to preserve order amid change and to preserve change amid order.

—Alfred N. Whitehead



SURVEY OF BOOKS FOR EXECUTIVES

BUSINESS INVESTMENT POLICY: *A MAPI Study and Manual.*

By George Terborgh. Machinery and Allied Products Institute and Council for Technological Advancement, Washington, D.C., 1958. 260 pages. \$10.00.

*Reviewed by John A. Griswold**

A capital budget decision is one of the most important a business executive is required to make. Such decisions often influence the modernity and developmental direction of productive plant and the company's competitive position, and the total of all such decisions irrevocably commits the capital of society as well, thus affecting the country's international standing. This does not mean that capital budget decisions advantageous to a single company necessarily contribute to the nation's welfare. It does denote, however, that outlays for capital goods, with their meaning for the firm's and the nation's future, ought to be made on the most rational basis possible, rather than through hunch and in-

tuition, as they have commonly been made for many years.

Two factors have in the past interfered with a reasoned approach to capital budget problems: (1) lack of knowledge about analytical means for bringing together the complex factors necessary for a logical conclusion, and (2) lack of confidence in the forecast estimates that must bear on a decision.

More recently, however, new forecasting techniques that have been developed and analytical methods that have been devised and publicized are overcoming this former feeling of futility about reasoned capital budget decisions. The author of this book, George Terborgh, was a pioneer in this educational effort, giving particular attention to the important replacement aspect of capital budget decisions.

Terborgh here expands his original MAPI replacement formula into an analytical system that combines the many complex factors that enter into a logical and usable summary figure. Traditionally, replacement expenditures have taken place without much analysis—at worst when a machine was worn out and unrepairable, at best by a mechanistically predeter-

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mined schedule. This book offers a way to arrive at reasoned solutions of problems of equipment replacement—solutions based on the measurement of “relative” rather than “absolute” return.

The absolute return depends on the excess of the revenue generated by the project over the operating costs incurred by it. . . . The relative return, on the other hand, depends on the difference between having the project and going on without it for a specified period of time. Here there may be as many rates of return as there are possible periods of deferment.

This refinement in analysis is an important contribution to our thinking on replacement costs. Measurement of rate of return by this concept uses not just a formula but a framework of analysis that merits being called the MAPI system. It makes possible a more realistic ranking of the replacement projects that in most firms compete for the often scarce capital dollar.

Part I of the book sets forth the general replacement problem, briefly reviews the earlier MAPI formula, states the current improvements to be discussed, and sets a simple, understandable background for the theory of the MAPI system that follows in Part II. The author modestly suggests that readers without interest in theory might omit Part II. But his simple, clear presentation of the complexities of the system in terms of an ordinary knowledge of arithmetic is so understandable that it would be unfortunate if even those concerned only with practical MAPI application should follow his suggestion. For readers interested in mathematical

theory, there is an appendix showing the derivation of the earlier MAPI formula, which still plays a part in the revised analytical system.

In application of the system, Part III calculates the relative rate of return for the next year only. This period is used (1) for simplicity and for the convenience of adjusting calculations to the yearly basis of corporate books of account, and (2) because it is more realistic to project earnings for only one year ahead than for many years. Factors that enter into calculating this relative rate are:

1. Net investment in the replacement project.
2. Next year's operating advantage.
3. Next year's avoided capital consumption.
4. Next year's capital consumption.
5. Next year's income tax adjustment.

The nature of these five elements having been discussed in Part II, Part III sets forth their use in a simple, effective calculation system using a series of blank computation forms that can easily be reproduced for company use. Several specific applications are also provided.

The completion of Sections I and II of the computation form gives a summary figure showing next year's dollar advantage in having the replacement. The completion of Section III will then adjust this figure to next year's capital consumption and income tax obligation, resulting finally in a usable summary measure of all the complex factors that influence the rate of return, called

"the MAPI urgency rating." It is in Section III that the complex problems of capital consumption measurement occur. Here the earlier MAPI formula appears, enhanced by refinements and elaborations.

Although Terborgh wishes it were possible to avoid the prediction of absolute earnings far in advance, he realizes that it is a necessary process in arriving at a capital consumption measure and handles the problem in a neat, stylized way, both by means of (1) models and more detailed charts embracing projects having salvage value from zero to 50 per cent and (2) by forecasting earnings that would result from three logically possible trends in the life of a replacement project: constant decline in absolute earnings; rapid earnings decline in the later years; and rapid earnings decline in the early years. The use of the system requires matching a proposed project with the model or charted pattern that most nearly corresponds in salvage value and trend of income stream with expectations from the expenditure.

Another problem in finding a capital consumption measure is that of arriving at a proper discount rate. Since capital consumption is the decline in value with wearing out, the capital value of a machine at any particular time is the present worth of the service that is left in the machine or, in other words, the discounted value of its future service. To establish some reasonable discount rate for finding this value, a model is given which represents the average capital costs and capital structure of American corporations; namely, debt capital, 3 per cent, equity, 10 per

cent, and debt ratio, 25 per cent, giving a model cost-of-capital of 8.25 per cent. Using these average figures, the next year's capital consumption can be arrived at through the formulae expressed in Appendix D.

Most users of the system will welcome, however, the three charts presented in the envelope inside the book's back cover, which are more detailed than the earlier MAPI charts. There is one for each of the three earning stream patterns mentioned above, each chart providing curves for both straight-line and accelerated depreciation, as well as suitable tables for making income tax adjustments. By using the appropriate chart, a capital consumption figure can quickly be arrived at. This figure is then used to adjust the next year's operating advantage figure, which has been found previously and entered on Computation Form III. This adjusted figure, when related to the net investment in the project, will give the "MAPI urgency rating."

This revised, more detailed MAPI approach to equipment replacement analysis will doubtless be subject to some prejudiced criticism, as was the earlier MAPI formula, much of it arising from unfamiliarity with terms and from a failure to understand the mathematical background. While some valid technical criticisms may be made by the specialist, the problem that will first strike the executive who considers using the system will be the apparent rigidities in the calculation of capital consumption. However, this problem does not in the least disqualify the system. As anyone working in capital budgeting knows, important decisions must be

made even though many future facts are unknown. Risks have to be taken on the best surmise of what the future will bring. Many budget-analysis systems work figures out to the last dollar, but this spurious accuracy is not criticized for its rigidity, even though the forecasts may actually point only to a direction of movement. The rigidities common to all budget-analysis systems may be less disguised in the MAPI approach, but they are no greater than those of other methods. In fact, the stylized character of the MAPI models recognizes even more clearly the fact that forecasts can at best be only general.

One of the few disappointing discussions in the book is in Part III, "Some Managerial Problems," where cost-of-capital is considered in relation to the cut-off point. While the discussion is stimulating, it fails to grapple with the basic problem of the cost of equity capital and its influence on the choice of a cut-off point. This problem is crucial in most capital expenditure decisions,

but it is a formidable subject, and perhaps expecting an exhaustive discussion would be looking for too much from a single book—even one as good as this is.

On the whole, the MAPI system set forth in this book is an important contribution to the theory and practice of capital goods replacement. It shows the importance of putting money values on all the elements involved in replacement analysis. Also by emphasizing relative rather than absolute rate of return, it provides a scheme for giving consideration to changes in obsolescence rates. In its present form, the MAPI system gives a clear, easily usable method for making a reasoned choice among competing replacement projects. It is a valuable and ingenious improvement over the earlier MAPI formula, both theoretically and practically. *Business Investment Policy* should be studied by every executive involved in capital expenditure decisions, and its principles, methods, and ratings should be given serious consideration in any replacement decision.

Briefer Book Notes

(Please order directly from publishers)

GENERAL

YOU AND MANAGEMENT. By Daniel R. Davies and Robert T. Livingston. Harper & Brothers, New York, 1958. 272 pages. \$4.50. A practical introduction to the management field designed for those who are interested in careers as managers. The topics covered include what managers do, what managers are like, managers and groups, paths to managerial perspective, and management development programs. Self assessment and development checklists and guides as well as suggested reading lists are included.

LINEAR PROGRAMMING: Fundamentals and Applications. By Robert O. Ferguson and Lauren F. Sargent. McGraw-Hill Book Company, Inc., New York, 1958. 342 pages. \$10.00. In this clear discussion of what linear programming can do and the results it can achieve, the author shows why linear programming is a significant advance in scientific management, how it helps in selecting, gathering, processing, and interpreting facts and information, and where and how businessmen can apply it to their own problems in industry.

CORPORATE BOND QUALITY AND INVESTOR EXPERIENCE. By W. Brad-dock Hickman. Princeton University Press, Princeton, N. J., 1958. 536 pages. \$10.00. The second in a three-volume series reporting the findings of a National Bureau of Economic Research study of corporate bond financing. It presents detailed statistical information on the characteristics and behavior of straight corporate bonds offered during 1900-1943. The accepted methods of measuring bond quality are used to rank securities, and the actual performance of the securities in each class is analyzed in terms of the rate of default, the rate of loss, and the realized rate of return.

ARM'S LENGTH TRANSACTIONS. By Robert S. Holzman. The Ronald Press Company, New York, 1958. 169 pages. \$10.00. The author analyzes the arm's length provision of the Internal Revenue Code and explains the circumstances under which the Treasury may reallocate items of income and expense. Leading cases are examined to show how trade and business practices have figured in the courts' decisions.

THE INCOME TAX BURDEN ON STOCKHOLDERS. By Daniel M. Holland. Princeton University Press, Princeton, N. J., 1958. 239 pages. \$5.00. An analysis of the differential tax burden on stockholders based on a study of federal income-tax returns from 1940 to 1952. The author discusses such topics as alternate measures of the differentials against net corporate earnings and stockholders' income, the taxation of corporate earnings and progres-sivity, and the relief provisions of the Internal Revenue Code of 1954. A highly technical treatment intended primarily for specialists in the field.

Publications Received

(Please order directly from publishers)

GENERAL

PRACTICAL SPEAKING FOR THE TECH-NICAL MAN. By John E. Dietrich and Keith Brooks. Prentice-Hall, Inc., 70 Fifth Avenue, New York 11, N. Y. 1958. 310 pages. \$6.00.

HOW TO READ BETTER AND FASTER. By Norman Lewis. Thomas Y. Crowell Company, 432 Fourth Avenue, New York 16, N.Y. 1958. 398 pages. \$2.50.

MONEY AND BANKING, 4th Edition. By Steiner, Shapiro, and Solomon. Henry Holt and Company, 383 Madison Avenue, New York 17, N. Y. 1958. 740 pages. \$7.00

THE FRENCH ECONOMY AND THE STATE. By Warren C. Baum. Princeton University Press, Princeton, N.Y. 1958. 391 pages. \$7.50.

CAUSE AND CONTROL OF THE BUSINESS CYCLE. By E. C. Harwood. American Institute for Economic Research, Great Barrington, Mass. 1957. 159 pages. \$1.00.

A GUIDE TO EFFECTIVE REPORT WRITING. Industrial Relations News, 230 West 41 Street, New York 36, New York. 1957. 30 pages. \$1.50.

ENGLISH FOR BUSINESS, Third Edition. By Charles Chandler Parkhurst. Prentice-Hall, Inc., 70 Fifth Avenue, New York 11, N. Y. 1958. 417 pages. \$3.40.

RESISTING BUSINESS CONTRACTION. Chamber of Commerce of the United States, Washington 6, D.C. 1958. 17 pages. 50 cents.

SOURCES OF INFORMATION AND UNUSUAL SERVICES, Fifth Edition. Informational Directory Company, 200 West 57 Street, New York 19, N.Y. 1958. 84 pages. \$2.50.

REHABILITATION: A COMMUNITY CHALLENGE. By W. Scott Allan. John Wiley & Sons, Inc., 440 Fourth Avenue, New York 16, N.Y. 1958. 247 pages. \$5.75.

MATHEMATICS IN BUSINESS. By Lloyd L. Lowenstein. John Wiley & Sons, Inc., 440 Fourth Avenue, New York 16, N.Y. 1958. 363 pages. \$4.95.

ESSENTIAL BUSINESS MATHEMATICS, Third Edition. By Llewelyn R. Snyder. McGraw-Hill Book Company, Inc., 330 West 42 Street, New York 36, N.Y. 1958. 470 pages. \$5.50.

A CRITIQUE OF THE UNITED STATES INCOME AND PRODUCT ACCOUNTS. By the Conference on Research in Income and Wealth. Princeton University Press, Princeton, N.J. 1958. 589 pages. \$11.50.

THE SECRETARY AT WORK. By Madeline S. Strony and M. Emily Greenaway. Gregg Publishing Division, Mc-

Graw-Hill Book Company, Inc., 330 West 42 Street, New York 36, N.Y. 1958. 154 pages. \$2.25.

SELECTED READINGS IN ECONOMICS. By C. Lowell Harriss. Prentice-Hall, Inc., 70 Fifth Avenue, New York 11, N.Y. 1958. 546 pages. \$3.95.

READABILITY: AN APPRAISAL OF RESEARCH AND APPLICATION. By Jeanne S. Chall. Bureau of Educational Research and service, Ohio State University, Columbus 10, Ohio. 1958. 202 pages. \$3.00.

ORAL COMMUNICATION OF TECHNICAL INFORMATION. By Robert S. Casey. Reinhold Publishing Corporation, 430 Park Avenue, New York 22, N.Y., 1958. 199 pages. \$4.50.

PROGRESS IN PEACEFUL USES OF ATOMIC ENERGY, JULY-DECEMBER 1957. Superintendent of Documents, U.S. Government Printing Office, Washington 25, D.C. 1958. 463 pages. \$1.25.

THE INDUSTRIAL CHALLENGE OF NUCLEAR ENERGY. Organization for European Economic Co-Operation, Suite 1223, 1346 Connecticut Avenue, N.W., Washington 6, D.C. 1958. 301 pages. \$3.50.

A STUDY IN LIQUIDITY: *The Impact of Inflation on Monetary Accounts.* Michigan Business Studies, Vol. XIV, No. 2. By William A. Paton, Jr. Bureau of Business Research, School of Business Administration, University of Michigan, Ann Arbor, Mich., 1958. 176 pages. \$5.00.

A READING LIST ON BUSINESS ADMINISTRATION: *Seventh Revision.* The Amos Tuck School of Business Administration, Dartmouth College, Hanover, N.H., 1958. 68 pages. \$2.00.

THE JOB OF THE FEDERAL EXECUTIVE. By Marver H. Bernstein. The Brookings Institution, Washington, D.C., 1958. 241 pages. \$3.50.

AMA CONFERENCE CALENDAR

FEBRUARY - APRIL, 1959

<u>DATE</u>	<u>CONFERENCE</u>	<u>LOCATION</u>
February 2-4	SPECIAL INTERNATIONAL MANAGEMENT CONFERENCE: International Operations in the Company's Structure and Future	Biltmore Hotel, New York
February 9-11	MARKETING CONFERENCE: Evaluating Your Total Mar- keting Program	Statler-Hilton Hotel, New York
February 16-18	MID-WINTER PERSONNEL CON- FERENCE	Palmer House, Chicago
February 23-25	SPECIAL RESEARCH AND DE- VELOPMENT CONFERENCE: Planning, Producing, and Promoting New Products	LaSalle Hotel, Chicago
March 2-4	SPECIAL ELECTRONICS CON- FERENCE	Statler-Hilton Hotel, New York
March 23-25	SPECIAL MANUFACTURING CONFERENCE: Integrated Materials Management	Roosevelt Hotel, New York
April 13-15	28th Annual PACKAGING CONFERENCE and	Palmer House and
April 13-17	PACKAGING EXPOSITION	International Amphitheater, Chicago

To register or to obtain additional information on any of the conferences listed above, please contact Department M2, American Management Association, 1515 Broadway, New York 36, N.Y.

